



## 2018 Restricted Substance Management Standard

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Ford Motor Company  
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Dearborn, MI 48126-2798

April 1, 2018

To: All Suppliers Doing Business with Ford Motor Company

Subject: 2018 Global Restricted Substance Management Standard (RSMS), Conflict Minerals, and American Automobile Labeling Act Reporting Requirements

This letter communicates the release of the 2018 RSMS, Conflict Minerals, and American Automobile Labeling Act (AALA) reporting obligations. All Ford Motor Company internal and external suppliers are required to submit data in support of Vehicle Program timing deadlines.

Compliance with these requirements is consistent with Ford Motor Company's commitment to environmental responsibility and conformance to global governmental regulations. Full compliance is a requirement of the production and non-production Ford Global Terms and Conditions and a key element of Q1, PPAP/PSW, and Program Engineering Sign-Off events.

#### Actions Required

- Confirm the receipt of this communication by completing the RSMS confirmation in the GMM Supplier Portal. Review the attached requirements, obtain parts lists, and report data as required.
- Full IMDS reporting and full compliance with this Standard must be achieved at the GPDS <PEC> (Preliminary Engineering Completion) gateway or 8 months before <MP1> (Job 1).
- By December 31, 2018, provide the "Full RSMS Certification" for all products (production and service) in all markets via the Ford Certification Screen in IMDS and for all non-dimensional production materials via the Ford Supplier Portal (see attachment).
- New in October 2017, South Korea MOE Notification No. 613 now requires physical testing data to be made available upon request for hazardous substances. When Ford receives a request for data for specific parts the supplier is required to provide physical test data as specified in the South Korean MOE Notification No. 613.
- If your company provides products to Ford Motor Company that contain tin, tungsten, tantalum or gold, submit a Conflict Minerals Reporting Template by September 30, 2018, as described in the Conflict Minerals section of the Ford Supplier Portal.
- For products sold in the U.S., provide the combined U.S. & Canada percent content by dollar value for all parts to support AALA compliance by each product launch date. Please provide this information when solicited.
- Review the "2018 RSMS Substances Being Considered for Prohibition" attached to the RSMS Package.
- Suppliers of non-dimensional materials have additional reporting requirements driven by regulations which incorporate the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) as listed in Section 3 of the RSMS Reporting Requirements and Guidelines document.
- Review the forecasting document entitled "2018 RSMS Substances Being Considered for Prohibition" that is attached to the 2018 RSMS Package.
- The 2018 Global Sustainable Materials Strategy (SMS) initiatives to reduce target toxic chemicals from our manufacturing operations can be found in the forecasting document.

If you have general questions, please contact either Bing Xu at (313) 805-4888, [bxu1@ford.com](mailto:bxu1@ford.com); or Kelly Keller at (313) 845-4563, [kkelle17@ford.com](mailto:kkelle17@ford.com).

Kimberly Pittel  
Group Vice President  
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## Attachment

### Steps to Access the Ford Supplier Portal (Covisint)

Covisint hosts the Ford Supplier Portal (FSP) for Ford Motor Company. The FSP works as the gateway between suppliers and internally hosted Ford applications. Companies must register and be approved in Covisint to access Ford applications on the FSP.

#### Technical Requirements

- Internet Explorer 8.0 or higher

#### To access this web application, you must have:

1. A Covisint User ID and Password
2. Permission to access the Ford Supplier Portal Service
3. Access to the GMM Supplier Portal and GMAP-e1291 application
4. Permissions to the applicable parent GSDB code/site GSDB code(s)

If you have all of the requirements listed above, please follow the steps outlined in Section A. If you are missing any of these items, please go to Section B before proceeding to Section A.

#### Section A: How to access the GMM Supplier Portal/GMAP-e1291 on the FSP:

- a. Go to <https://fim.covisint.com/ap/ford?TARGET=https://fsp.covisint.com>.
- b. Click on the **Login** link.
- c. Enter the *appropriate* Covisint user ID and password.
- d. Click the **Login** push button.
- e. **Select the Applications tab at the top of the screen.**
- f. In the **Filter by** text field, click the drop-down arrow, select Functional Area, then select **Environmental** from the list.
- g. Click the **Search** push button.
- h. Click on **GMM Supplier Portal** or **GMAP-e1291** to launch the application. (If you don't see the GMM application, please reference Section B 2 below.)
- i. In GMM Supplier Portal: PPAP approval status is shown under **Parent, Site Metric** or **Complete Parts Report**.
- j. In GMAP-e1291: Non-dimensional materials disclosures including legally complied MSDS or GHS-SDS are performed by clicking on the "GMAP-e1291 for Supplier" link. For training on the GMM Supplier Portal, click the **Help** button to access the user manual. For training on the GMAP e1291 system, please follow the **e1291 Quick Reference Guide** link.
  - \* To certify in the GMAP e1291 application, click the **RSMS Certification – (Non-Dimensional Materials)** link.
  - \* To certify in IMDS, click the **Certification** link in IMDS at <http://www.mdsystem.com>. Please note that proper access will be needed in order to access the Certification screen. Please contact your IMDS Client Manager for assistance.

Click the **Confirm** button. A confirmation screen is displayed with a reference number that verifies data was saved successfully. The reference number is for information purposes only.

## Section B: Information on accessing the Ford Supplier Portal

### 1. How to get a Covisint ID and password and register for the Ford Supplier Portal

- a. A supplier accessing the GMM Supplier Portal / GMAP-e1291 application must be a member of the Ford Motor Company Global Supplier Database (GSDB). Please contact your internal Ford sales representative for information on your company's GSDB code.
- b. The supplier company must be registered in Covisint. Each user must obtain a Covisint user ID and password.
- c. If your Company is not registered with Covisint or the Ford Supplier Portal, go to <https://us.register.covisint.com/CommonReg?cmd=REGISTER> and select the **New Top Level Organization** radio button. Follow the registration steps, and make sure to select **Ford Supplier Portal** at the service package screen. When asked to enter the GSDB code, please enter your four digit Parent GSDB code.  
For further instructions on registering a company on the FSP, go to [https://web.fsp.ford.com/FSP/desk\\_manual/NAV2222G.htm](https://web.fsp.ford.com/FSP/desk_manual/NAV2222G.htm) and follow the instructions associated with the menu item: **Register a company for FSP**.
- d. For a new user whose company is registered with Covisint, but who does not have a Covisint User ID and password, go to <https://us.register.covisint.com/CommonReg?cmd=REGISTER> and select the **New User** radio button. Follow the registration steps, and make sure to select **Ford Supplier Portal** at the service package screen. When asked to enter the GSDB code, please enter your four digit Parent GSDB code.  
For further instructions on registering a new user on the FSP, go to [https://web.fsp.ford.com/FSP/desk\\_manual/NAV2223G.htm](https://web.fsp.ford.com/FSP/desk_manual/NAV2223G.htm) and follow the instructions associated with the menu item **Register a User for FSP**.

### 2. How to get access to the GMM Supplier Portal or the GMAP-e1291 application

- a. For instructions on requesting access to an application on the FSP, log into Covisint at <https://fim.covisint.com/ap/ford?TARGET=https://fsp.covisint.com> and follow the **How to request an application** link under the Ford Supplier Portal Key Information section.

### 3. How to get permissions to the applicable parent/site GSDB code(s) or to request access to additional GSDB code

- a. Log in to Covisint  
<https://fim.covisint.com/ap/ford?TARGET=https://fsp.covisint.com>.
- b. Click the **How do I request additional site codes for an application** under the Ford Supplier Key Information Section.

If you have any questions or concerns regarding obtaining access to the GMM Supplier Portal or GMAP-e1291 application on the Covisint website, please contact the Covisint help desk. Global Covisint contact information is available at

<https://portal.covisint.com/web/supportauto/contactus/autosupplier>

If you have all required access permissions but still have problems accessing the application please contact [rsmshelp@ford.com](mailto:rsmshelp@ford.com)



RESTRICTED SUBSTANCE MANAGEMENT STANDARD

WSS-M99P9999-A1

1. SCOPE

The purpose of this Standard (RSMS) is to inform suppliers to Ford Motor Company, and Ford personnel, of restrictions pertaining to certain substances. By regulation or by Ford direction, these substances shall be restricted or excluded from parts, materials, equipment, packaging, office supplies, machinery and/or tooling, hereinafter referred to as "product(s)", supplied to and/or manufactured by Ford or intended for use in Ford products. This Standard supplements but does not supersede the responsibility of each supplier to comply with laws and regulations for the receiving Ford location(s). It is the duty of all Suppliers of products to Ford to comply with this Restricted Substance Management Standard. This document also explains Ford Motor Company's commitment to product compliance, quality assurance, health and safety, and environmental management. SUPPLIERS' REPORTED DATA WILL BE USED TO PROVE LEGAL COMPLIANCE.

2. APPLICATION

All products supplied to Ford (all Brands, world-wide) must comply with the latest version of this Standard, regardless of when they were originally approved.

References to "Ford" within this document shall be understood to include all joint venture vehicles that are Ford badged, e.g., JMC, ChangAn, Ford Otomotiv Sanayi A.S., Otosan, Blue Diamond, Sollers OJSC as well as all Ford fully owned companies, e.g. CNG-Technik GmbH and Lincoln Motor Company.

This Standard is normally reissued (with or without revision) in the first quarter of each calendar year. The applicable version is the document with the current year shown in the revision box - page 1.

The 2018 RSMS reporting timing covers 2018 and forward model years (MY). The timing requirements for prior model year production and service parts are covered by earlier versions of RSMS. Items already reported which contain new substances listed in this revision need to be resubmitted to include these new substances. Suppliers who have not complied with earlier reporting requirements are expected to submit past due information immediately.

3. REQUIREMENTS

Meeting RSMS and its reporting requirements continues to be a requirement of the Production Part Approval Process (PPAP) and part of the Manufacturing Site Assessment, a key element of the Q1 requirements. It is the duty of all suppliers of products to Ford to comply with the requirements of this Restricted Substance Management Standard (RSMS). For vehicle parts - compliance to RSMS is required by GPDS milestone <PEC> for each vehicle, which is approximately 8 months before job 1. Please note that although IMDS is a requirement for approval of PPAP, the due date for completed and approved IMDS is the <PEC> milestone. It should be noted that all non-dimensional materials (e.g., chemicals) and "hazardous articles", which are intrinsically hazardous, or which form or release hazardous substances during use, recycling or disposal (e.g., "dry" friction materials, welding rods or wires, solders, heat resistant materials), are subject to separate detailed evaluation and clearance by Ford Toxicology and the Environmental Quality Office (EQO) in addition to the requirements of this Standard. This clearance must be completed prior to supplying product to Ford. Details of this process and any brand-specific direction can be obtained by contacting the appropriate regional Toxicology or Environmental Quality Office (EQO).

Date	Action	Revisions
2018 04 01	Revised	2018 K. Keller
2017 04 01	Revised	2017 K. Keller
1984 01 11	Activated	E. Rezendes



### 3.1 INSTRUCTION APPLYING TO ALL PRODUCTS SUPPLIED TO FORD MOTOR COMPANY

Section 3.1 relates to general requirements affecting all products supplied to Ford. Restricted substance categories are alphabetically listed, with the type of restriction indicated, in Attachments 2 and 3, and are also referred to indirectly on a hazardous properties basis in 3.1.5. The RSMS Attachments 2 and 3 and RSL (Restricted Substance List) will no longer show rows for Declarable substances whose declaration threshold is 0.1 % (weight percent). Ford Motor Company requires suppliers to declare ALL dimensional and non-dimensional substances if present at or above 0.1 % (weight percent). Where suppliers are required to declare substances below 0.1 %, those substances will be specifically listed in the RSMS/RSL for enhanced disclosure. In addition, all prohibited substances are required to be declared at the detection limit, these substances will not be listed separately in the Declarable Section of the RSL. See section 0.2 of Attachments 2 and 3 for declaration requirement.

3.1.1 Paragraph Deleted. Refer to Section 4.

3.1.2 Provision of Data on the Chemical Composition: In addition to information required for compliance to this Standard, supplier, upon request, shall provide the composition (chemical identity of each constituent and its proportion by weight) of products supplied or proposed to be supplied and all TOXICITY, HEALTH, SAFETY and DANGEROUS GOODS TRANSPORTATION data/guidance to the requesting Ford Toxicology and the Environmental Quality Office. **Prior to making any change to the composition or hazard labeling of such products, the supplier shall advise the regional Ford Toxicology and Environmental Quality Office.**

3.1.2.1 Ford Motor Company requires disclosure of the Confidential Statement of Formula (CSF) of all substances within all non-dimensional materials and hazardous articles to a level of  $\geq 0.1$  % w/w in order to meet Health, Environmental regulatory and internal requirements, unless specified at a lower mass percent in the Ford Restricted Substances Management Standard and List (Attachments 2 and 3 & RSL, respectively) or in the requirements for Toxicology evaluation and the clearance of materials, as mentioned in Section 3 - Requirements of this Standard.

3.1.2.2 Submission of a mixture / compound composition report should list all chemical ingredients present at or above 0.1 % w/w unless chemicals reportable at levels below 0.1 % w/w are otherwise specified by the Ford Restricted Substances Management Standard and List (Attachments 2 and 3 & RSL, respectively). Use exact component percentages where possible. Where concentration ranges are necessary, they should be no broader than 10 % (e.g. 0 - 10 %, 5 - 15 %, 20 - 30 %). Composition will either total exactly 100 %, or the sum of the minimum ranges must be less than 100 % but no less than 85 %, and the sum of the maximum ranges must be greater than 100 % but no more than 115 %. Where ranges are given, they must reflect true possible values, and must be justifiable (e.g. cases of feedstock / supply-base variability) upon request. Classification and labeling of materials will be based on the upper level of the ranges stated for each component. Confidential formulation data submitted through the supplier portal will be held under the FORD Global Terms and Conditions (GTC).

3.1.2.3 North America Production Materials: Suppliers are now required to submit all three North American country languages (NOM STPS Spanish, OSHA English, WHMIS English and WHMIS French) with each e1291 data submission.

3.1.2.4 For Ford North America Aftermarket Products, please refer to the Data Quality Requirements for Ford North American Operations, Post Production Materials.



3.1.3 Non-dimensional production material intended for service use – Ford Customer Service Division (FCSD)

3.1.3.1 **Legal (regulatory) requirements:** The manufacturer and other involved suppliers are required to fully meet FCSD internal and all external regulatory requirements applicable to **all of the regions/countries in which a non-dimensional production material will be required for service use.**

These requirements include providing all information/data to FCSD and executing supporting actions:

- necessary to enable FCSD to perform post production material reviews and create required compliance documentation, including (Material) Safety Data Sheets and labeling statements/labels
- associated with regional and national substance registration
- necessary to enable FCSD to conduct any required product registration and notification
- required to support any other service chemical-specific regulatory requirements

3.1.3.2 **Regional availability and other service-specific requirements:** In regards to regional availability and other service-specific requirements, the manufacturer and other involved suppliers are required to:

- ensure availability of the material for each region in which a component or vehicle is sold and/or serviced
- offer the material in an appropriate set-up (e.g., FCSD brand, container size, order quantity) independent of the yearly service volumes
- provide a material with a shelf life of > 24 months
- support a service lifetime up to 15 years once a vehicle is out of production

3.1.4 Provision of Data for Environmental Control Support: Supplier, upon request, shall disclose information for assessment of disposal or effluent treatment if product constituents are anticipated to be released into AIR, WATER OR SOIL, or require special declaration or control.

3.1.5 Assurance of Compliance: All products shall be supplied in compliance with the regulations on substance REGISTRATION, NOTIFICATION OF NEW CHEMICALS/SUBSTANCES, PACKAGING AND LABELING which are in place in the Ford receiving location(s) where the products are supplied.

3.1.6 Products Containing Dangerous Substances: Non-dimensional materials (e.g., chemicals) and "hazardous articles" that contain substances which have been identified as having any CARCINOGENIC, MUTAGENIC, REPRODUCTIVE TOXICITY, ECOTOXICITY, or SENSITIZING PROPERTIES (see Definitions, Appendix 1) shall not be supplied without prior notification of these characteristics to Ford Motor Company. (e.g. via the GMAP-e1291 approval process, where applicable, at <https://web.emmg.ford.com/e1291/menu/index.htm>)

3.1.7 Suppliers shall aim to reduce or replace carcinogenic, mutagenic, reprotoxic or persistent, bioaccumulative and toxic substances in the products they supply to Ford.

3.1.8 Some US States and EU countries are implementing bans on selling products with micro beads (soaps, etc.) therefore these products shall not be supplied to Ford Motor Company.



- 3.1.9 Products of or from endangered species must not be supplied to Ford Motor Company in any form.
- Products of or from endangered species includes any substance or material that originates from an endangered species. Lists of endangered species include:
- 1) Latest International Union for Conservation of Nature and Natural Resources (IUCN) Red List of Threatened Species <http://www.redlist.org/>
  - 2) European Union (EU) Regulation 338/97 on the protection of species of wild fauna and flora by regulating trade therein and its amendments.
  - 3) United States Endangered Species Act.
  - 4) United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) Species Database <http://www.unep-wcmc-apps.org/species/dbases/about.cfm>.
- 3.1.10 Submission of the Supplier Restricted Substance Information: Suppliers of facility machinery, equipment and/or tooling (e.g., conveyers, presses etc.), that contain any of the substances listed in Attachments 2 and 3 as "prohibited" must submit the Supplier Restricted Substance Information Reporting Form (Appendix 3 – Reporting Matrix) and conform to section 4.5.1 prior to shipment to Ford.
- 3.1.11 Notification of the Responsible Ford Activity: Without notification and acknowledgement from the appropriate Ford Motor Company Materials & Standards Engineering activity, suppliers shall not supply products containing substances that will, in use, adversely affect the vehicle interior with respect to human health including allergic reactions.
- Ford Motor Company will provide electronic acknowledgment(s) to the submitter:
- 1) Verifying receipt of the suppliers' submission(s) to IMDS (International Material Data System) and GMAP-e1291 (where applicable),
  - 2) Compliance or non-compliance of the data therein to the WSS-M99P9999-A1 and
  - 3) Receipt of their certification of compliance with WSS-M99P9999-A1.
- 3.1.12 Instruction for Radioactive Products: Radioactivity contamination should meet "Unconditional Use Clearance Level" requirements consistent with International Atomic Energy Agency (IAEA) and the Commission of European Communities (CEC) standards for individual radionuclides IAEA-TECDOC-855 (1996) & Safety Series RS-G-1.7 (2004).
- [http://www-pub.iaea.org/MTCD/publications/PDF/te\\_855\\_web.pdf](http://www-pub.iaea.org/MTCD/publications/PDF/te_855_web.pdf)  
[http://www-pub.iaea.org/MTCD/publications/PDF/Pub1202\\_web.pdf](http://www-pub.iaea.org/MTCD/publications/PDF/Pub1202_web.pdf)
- Note:** Radioactive sources or devices used in manufacturing processes are exempted.
- For additional radiation protection information see document Radiation Protection 122 (2000 and 2002, respectively).
- [http://www.ornl.gov/ptp/PTP%20Library/library/International/EuropeanCommission/122\\_part1\\_en.pdf](http://www.ornl.gov/ptp/PTP%20Library/library/International/EuropeanCommission/122_part1_en.pdf)  
[http://www.ornl.gov/ptp/PTP%20Library/library/International/EuropeanCommission/122\\_part2\\_en.pdf](http://www.ornl.gov/ptp/PTP%20Library/library/International/EuropeanCommission/122_part2_en.pdf)
- 3.1.13 Instruction for Timber Products: All timber products must be sourced from forests that comply with one of the following requirements:
- Certified under the "Forest Stewardship Council" or the "Programme for the Endorsement of Forest Certification Schemes" or
  - Declared as sourced from plantation or recycled timber or Licensed under the FLEGT system (EU Action Plan for "Forest Law Enforcement, Governance and Trade).
- 3.1.14 Prohibition of Re-usage: Re-use is prohibited for those parts (e.g., air bags, seats, inflators, etc.) listed in Annex V of the European Directive 2005/64/EC in the construction of vehicles covered by the European Directive 70/156/EC.





### 3.2 SUBSTANCE RESTRICTIONS (as identified in Attachments 2 and 3)

- 3.2.1 Substance Restrictions are identified in Attachments 2 and 3 by substance or regulatory category, type of restriction, threshold limit (where applicable), applications affected/exempted, and effective dates. All substances covered by Attachments 2 and 3 must be reported.
- 3.2.2 Substances designated as "Prohibited", (P), shall not be supplied in any products, subject to the stated directions on content threshold and affected applications. A maximum concentration value of 0.1% (by weight) of the homogeneous material shall be tolerated for these substances, unless otherwise subject to lower threshold limits, as specified by this Standard and the RSL. All RSMS/RSL listed substances which are intentionally added must be reported, and, where specified, also when not intentionally added (see Attachments 2 and 3).
- 3.2.3 Substances are designated, as "Declarable", (D), when present in a material or part in a vehicle, and are legally regulated, projected to be regulated, or required to be tracked for information gathering purposes.
- 3.2.4 For the purpose of this standard, monomers remaining in cured polymeric articles (including paints) are residual content and not considered "intentionally introduced". If prohibited substances conflicting with the above definition are identified in products supplied to Ford Motor Company, they must be reported (See Reporting Matrix – Appendix 3) and suppliers must institute immediate corrective measures. See special requirements for post-consumer recycle (PCR) materials. The substance need not be reported at less than 0.1 % by weight per homogeneous material, unless subject to explicit threshold content limits specified by this Standard. Thresholds for heavy metals are to be calculated on the basis of the elemental form of the metal.
- 3.2.5 Specific Chemical Abstracts Service (CAS) numbers for substances listed in this Standard affecting vehicle parts are illustrated in the current Global Automotive Declarable Substance List (GADSL, <http://www.gadsl.org>), also available on the "Ford Supplier Portal" (FSP) at: <https://fsp.portal.covisint.com/web/portal/home>. Additional CAS-identified substances listed in this Standard affecting non-dimensional material (chemical products) and "hazardous" articles will be available on the RSL in GMAP-e1291 website (<https://fsp.portal.covisint.com/web/portal/home>). It is the supplier's responsibility to ensure that they identify all affected substances - some of which may not be specifically identified in the GADSL or on the GMAP-e1291 website.
- 3.2.5.1 Confidential or trade secret chemicals that are RSMS listed substances must be disclosed to Ford Motor Company by CAS Number. Other substances not listed in the RSMS, accompanying RSL (Restricted Substance List) and/or GADSL lists that are confidential or trade secret chemicals that are subject to regulation can be disclosed by confidential accession number of the chemical inventory list applicable to the country in which the product will be sold/used. Inventory List examples: Toxic Substances Control Act (TSCA) uses Pre-manufacture Notice numbers in association with TSCA confidential accession numbers to denote registration of confidential chemicals on the US chemical inventory list. The Canadian Chemical Inventory List is the Domestic Substances List and its accession numbers are referred to as DSL Accession numbers.
- 3.2.5.2 The Ford Restricted Substance List (RSL) includes the most complete list of declarable and prohibited CAS Numbers available at the time of this publication. Please contact [kkelle17@ford.com](mailto:kkelle17@ford.com) to request the full Ford Restricted Substances List (RSL). Note: Supplier is responsible for determining if additional CAS Numbers contained in the product are subject to the substance categories. For suppliers who report confidential content through GMAP e-1291, a PDF of the RSL is available in the material entry screen in GMAP.

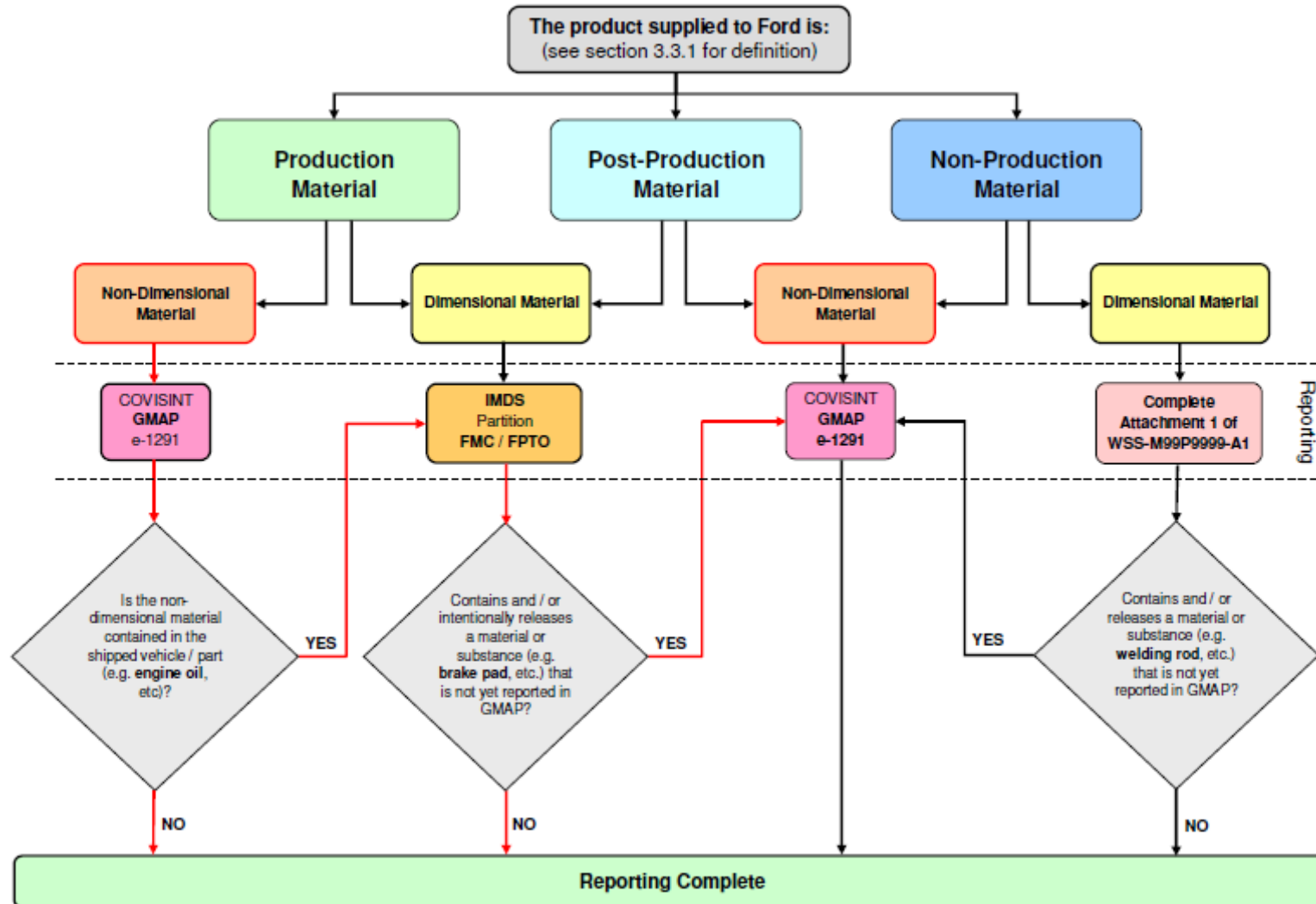


- 3.2.6 This Standard identifies substances and applications that are currently prohibited, as well as some that will become prohibited at a specified future date. To avoid unnecessary re-design/testing, new production parts must comply with these future prohibition requirements during **engineering validation gateways** based on GPDS (Global Product Development System) program requirements. If engineering validation of new production parts meeting the future prohibition requirements will not be possible, concurrence by the relevant Program Team and appropriate Materials Engineering function will have to be sought. This concurrence does not affect the requirement for all components to comply with the substance dates shown in the Ford RSL.
- 3.2.6.1 The production and use in mixtures of substances contained in the List for Authorization (Annex XIV REACH Regulation 1907/2006) will be prohibited after they have reached their individual sunset dates. FORD drives for phasing out those substances in mixtures as well as in articles by their sunset dates. In case no suitable substitute is available for the Annex XIV substance, the supplier needs to obtain approval from the Ford Global Material Compliance Group, who will determine the acceptance for continued use of the substance. The prerequisite to produce the substances or use in mixtures in EUROPE (EEA) is that the supplier must provide documentation about an application for or a valid authorization or about an already granted authorization for the intended use of the substance.
- 3.2.7 For production parts, unless otherwise noted, the Effective Date column of the RSL reflects "Put on the Market" dates. This normally reflects when products are delivered to the distribution area (left the assembly facility) and a transfer of ownership occurred. For products imported to regions implementing the EU End of Life Vehicle Directive, these dates reflect customs clearance dates in these regions. Suppliers shall supply the new parts without the prohibited substance 6 months before this date.



### 3.3 Reporting Pathways

This flowchart explains the reporting process for materials.



COVISINT GMAP e-1291 Website: <https://fim.covisint.com/ap/ford?TARGET=https://web.emmg.ford.com/e1291/menu/>.

IMDS Website: <https://www.mdsystem.com/imdsnt/>

Note: For more detailed reporting explanations and examples see Appendix 3 and the RSMS Reporting Requirements document

[TOP](#)



## 3.3.1 Definition of Materials

**Material**

Material within the text of this Standard means the primary medium that may contain a "substance", which is restricted by this Standard, such as a friction material (e.g. clutch or brake pad) containing lead sulfide. Acceptable material descriptions are Industry standards or Ford Motor Company standards/specifications. Where these are not available to define the material, a supplier's standards/specification may be used.

**Dimensional Material**

Dimensional materials are those having their own shape and are essentially solid. Most are considered "articles" (See definition of "Article"). Examples of these materials would include assemblies, components, semi-components and hard parts. Note that some dimensional materials (e.g. dry friction materials, steel, steel alloys, etc.) are "hazardous articles" and can release hazardous non-dimensional substances during/after processing, and would be subject to reporting obligations of section 4.5.2 and may require a TOX number.

**Non-Dimensional Material**

Non-dimensional materials are those that have no intrinsic shape without containing structure. Examples of these materials are fluids, gases, powders and semi-solids (pastes) like adhesives, greases, paints, bulk chemicals, and separately packaged chemicals in post-production service kits.

**Non-Production Material**

A dimensional or non-dimensional material used in Ford facilities which does not remain on products marketed by Ford.

**Post-Production Material**

A dimensional or non-dimensional material that is used to service a vehicle after it exits the assembly plant.

**Production Material**

A dimensional or non-dimensional material which becomes part of a product marketed by Ford.

## 4. RESTRICTED SUBSTANCE AND RECYCLED CONTENT REPORTING

**FOR THE REPORTING OF SUBSTANCES CONTAINED IN PRODUCTION PARTS (INCLUDING SERVICE PARTS), FORD MOTOR COMPANY SUBSCRIBES TO THE GLOBAL AUTOMOTIVE DECLARABLE SUBSTANCE LIST (GADSL, <http://www.gadsl.org>). ADDITIONAL OR MODIFIED REQUIREMENTS TO THE GADSL LIST ARE CONTAINED IN ATTACHMENTS 2 AND 3 AND THE RSL.**

4.1 **ELECTRONIC REPORTING USING THE INTERNATIONAL MATERIAL DATA SYSTEM (IMDS) (URL: <http://www.mdsystem.com/>)**

**ALL PARTS AND MATERIALS REMAINING ON A VEHICLE AT POINT OF SALE AND ALL SERVICE PARTS ARE REQUIRED TO BE REPORTED USING IMDS.**

Suppliers are required to meet the reporting deadlines for production and service parts consistent with the Global Production Development System (GPDS). Product data submissions should begin immediately to support vehicle program timing and should be completed by the reporting deadlines.

Full IMDS reporting and full compliance with this Standard must be achieved at the GPDS <PEC> (Preliminary Engineering Completion) gateway or 8 months before <MP1>(Job 1). For those programs where different body types of the same vehicle type are launched not at the same time, IMDS reporting for all body types is requested at gateway <PEC> or 8 month before Job 1 of the first body type launched. Components for Powertrain programs, which follow Powertrain Unit GPDS program timing, must achieve full IMDS reporting and full compliance with this Standard at the Unit Tool Development gateway <Unit TD> or 8 months before Powertrain Job 1.



#### 4.2 REPORTING USING THE CHINA AUTOMOTIVE MATERIAL DATA SYSTEM ([HTTP://WWW.CAMDS.ORG/](http://www.camds.org/))

ALL PARTS AND MATERIALS REMAINING ON CHINA LOCALLY PRODUCED VEHICLES AT POINT OF SALE AND ALL SERVICE PARTS ARE REQUIRED TO BE REPORTED USING CAMDS

FOR DETAILS REGARDING CAMDS REPORTING AND DATA TRANSFER, PLEASE REFER TO CHINA CAMDS REPORTING AND DATA TRANSFER REQUIREMENTS OF THE REPORTING REQUIREMENTS SECTION.

#### 4.3 SUBSTANCE DISCLOSURE IN IMDS

All substances contained in "The Global Automotive Declarable Substance List" (GADSL), **MUST** be disclosed in IMDS, along with any additional or modified requirements specified in **Attachments 2 and 3** and the associated RSL.

- ALL SUBSTANCES IDENTIFIED IN THE GADSL AS MODIFIED/ENHANCED BY THIS STANDARD MUST BE IDENTIFIED WITH THE CORRECT CAS NUMBER WHEN REPORTED IN IMDS (except some Fibers which are not reported by CAS number).
- The use of non-CAS identified substances is acceptable for the reporting of substances NOT covered in the GADSL AS MODIFIED/ENHANCED BY THIS STANDARD.
- Paints, polymers, adhesives and sealants etc. must be reported in the **cured state**.

Substances listed in RSMS **Attachments 2 and 3** and the RSL (which includes GADSL substances) **must not be** marked or reported as "confidential" or "secret" when reporting in IMDS. Please note that Ford Motor Company now requires suppliers to declare ALL substances if present at or above 0.1 % (weight percent). Where suppliers are required to declare substances below 0.1%, those substances will be specifically listed in the RSMS **Attachments 2 and 3** for enhanced disclosure. Only **specific** substances listed in **Attachments 2 and 3** and GADSL cannot be marked or reported as "confidential" or "secret" when reporting in IMDS. Please follow all IMDS recommendations and RSMS guidelines when utilizing "confidential" or "secret" reporting.

#### 4.4 REQUIREMENTS FOR IMDS REPORTING INCLUDING SPARE PARTS

**All Production parts** must be reported under the submission for the Tier 1 assembly, using the OEM released part number. If you supply Tier 2 (or Tier n) parts, this data must be sent to your customer. It is recommended that you use IMDS for data transfer of parts throughout the supply chain.

**Service part information** is required to be reported individually, per their assigned Ford Engineering number. The majority of service parts are common with production parts; however, service level details may require additional part reporting information. For production end item assemblies, the service component parts that make up that assembly **MUST** also be reported by their respective engineering numbers, in accordance with Sect. 4.0 of this Specification. Ford Customer Service Division (FCSD) will require RSMS certification of all service parts and components prior to distribution of these parts.

**Service unique parts** are also required to be reported. Service unique parts consist of:

- 1) Those parts sold and released by FCSD/PD, and usually, **not common** with production, (i.e., remanufactured components, service chemicals, etc.).
- 2) Those parts sold by FCSD and released by FCSD/PD, and **common** with production, although the end item part number isn't supplied for production (i.e., service kits containing component production parts to service production assemblies, filters, etc.).

**Spare parts** for servicing vehicles put on the market **prior to** 1 July 2003 containing Lead, Mercury, Cadmium and Hexavalent Chromium are exempted from complying with the material restrictions and reporting requirements, **except, for wheel balance weights, carbon brushes for electric motors, brake linings and convenience light switches**, which are still required to be reported and compliant (see **Attachments 2 and 3** for countries outside North America and Japan not following EU ELV Directive). **Remanufactured and re-used service parts** are exempted from the Lead, Cadmium and Hexavalent Chromium prohibition requirements of this Standard, provided they were already on the market at the expiry of an exemption (effective dates as listed in **Attachments 2 and 3**). All new materials used in the refurbishment of these parts **MUST** comply with the substance restrictions contained within this standard. Reporting requirements for spare parts, remanufactured and re-used service parts still apply if required by local or governmental law (e.g. European Union REACH Regulation).



For further reporting requirements please refer to the section "Substance and Materials Reporting and Compliance" in the Ford Global Terms and Conditions (GTC). Ford GTC can be found at: <https://web.fsp.ford.com/gtc/index.jsp> (this link requires access to the Ford Supplier Portal through Covisint).

**Bailment/Consignment Parts** - The bailment supplier (bailee) has the responsibility to submit IMDS data for all end item assembled part numbers to Ford Motor Company account 102. The bailment supplier (bailee) must collect all necessary IMDS data for the components from the component suppliers in order to complete the IMDS requirement. Component suppliers are required to submit IMDS to the bailment supplier (bailee). If the component part is a Ford end item part number the component supplier is required to submit IMDS to both the bailment supplier (bailee) and Ford Motor Company account 102 via the "Propose" option in IMDS.

#### 4.5 PARTS AND MATERIALS THAT REQUIRE DISCLOSURE BY OTHER METHODS (NOT IMDS):

##### 4.5.1 Facility equipment, tooling, packaging and office materials.

Suppliers of facility equipment, machinery and tooling (e.g., conveyers, presses etc.), packaging materials, office materials and any sub-components contained therein, **must ensure** that their products supplied to Ford containing substances that are listed in **Attachments 2 and 3** of this Standard **are reported** to Ford for resolution, using the *Supplier Restricted Substance Information Reporting Form* (Attachment 1) if any of the following conditions exist for the product(s) and it's sub-component(s):

- Part comes into direct contact with EMPLOYEE as a matter of routine use,
- Part comes into contact with any material/part integral to the vehicle or other equipment that does so { i.e., affects MARKET(s) }
- Part is a MAINTENANCE part that is periodically replaced and disposed,
- Part contains any substance or material that is/are illegal in the region/location receiving the equipment.

The supplier must also notify (by email) the **requester** (noted on the purchase order) and the **purchasing buyer** of any facility equipment, machinery, and/or tooling using any of the **Restricted Substance List** substances meeting any of the preceding conditions. Products containing such substances shall not be shipped to Ford until a signed acknowledgement is received by the supplier, from the **Ford Global RSMS Program Manager**, who will also communicate the acceptance and/or any issues with the information reported by the supplier to the Ford Motor Company manufacturing activity requesting the facility equipment and/or tooling.

To fulfill the EU legislation EC 1907/2006 "REACH", suppliers are required to send information on articles that contain > 0.1% of Substances of Very High Concern (SVHC). The information sent *should* include safe use instructions and **must** contain the substance name. This information must be sent to [REACHREP@ford.com](mailto:REACHREP@ford.com). This mailbox must be used to report all articles that have substances present in the RSMS list above 0.1 % per article.

##### 4.5.2 Non-dimensional materials

Suppliers of non-dimensional materials, which are **not associated within Dimensional Products**, and/or hazardous articles, are subject to the restriction requirements of this Standard (RSMS). Substances listed in this Standard and highlighted in sections 3.1.5 must be reported (e.g., through the GMAP - e1291 system). Non-dimensional materials for which full disclosure of RSMS-listed ingredients has been supplied to Toxicology and EQO according to Section 3.1.2 of this Standard, do not require additional reporting, (e.g., in IMDS) and will be certified through the GMAP-e1291 system, where applicable.

- ALL SUBSTANCES IDENTIFIED IN THIS STANDARD (SEE RSL) MUST BE IDENTIFIED WITH THE CORRECT CAS NUMBER WHEN REPORTED IN GMAP- e1291.
- If a supplier reports an RSMS substance without the correct CAS number, they will NOT be fulfilling the requirements of this Standard.
- The use of non-CAS identified substances is acceptable only for the reporting of substances NOT covered in this Standard.
- Paints, polymers, adhesives and sealants etc. must be reported in the **non-cured state**.
- Substances listed in this Standard (RSMS **Attachments 2 and 3** and RSL) **must not be** marked or reported as "confidential" or "secret" when reporting in GMAP-e1291.

**TOP**



- **An update of existing GMAP-e1291 data is required if there are changes in:**
  - Formulation and/or weight percent of RSMS listed substances (see MSDS Guidelines in GMAP e1291: <https://fim.covisint.com/ap/ford?TARGET=https://web.emmg.ford.com/e1291/menu/>)
  - Product name changes must be disclosed to requestor immediately upon occurrence and require a new GMAP-e1291 submittal against a new material request, rather than an update.

4.5.3 "Hazardous articles" **that do not remain on a vehicle at point of sale**, do not require disclosure in IMDS, but may require disclosure per section 4.5.2 if article becomes friable or otherwise releases hazardous substances during processing. These articles may also require a TOX number.

"Non-dimensional materials found in or on articles" **used in a Ford facility or that do not remain on a vehicle at point of sale**, do not require disclosure in IMDS, but may require disclosure per section 4.5.2 if known or reasonably anticipated to pose a health or environmental hazard during normal handling, use, service or disposal, or if otherwise regulated. These materials may also require a TOX number.

4.5.4 Packaging Materials and Other Non-production Hard Parts (office supplies, etc.)

Same REACH rules apply as described in 4.5.1. Please note that packaging material is considered as an article under the REACH regulation.

## 4.6 PARTS AND MATERIALS THAT REQUIRE REPORTING BOTH IN IMDS AND GMAP- e1291

Dimensional Products that are reported in IMDS may contain Non-dimensional Materials that will require further reporting via GMAP-e1291. Greases, lubricants, rust preventives, as well as paints, adhesives and sealants, etc. must be reported if known to, or reasonably anticipated to, pose a health or environmental hazard during normal handling, use, service or disposal, or otherwise require reporting due to environmental regulation (in the as received or uncured state). Also, some "hazardous articles" (e.g., dry friction materials) are required to be reported via both processes.

## 4.7 CERTIFICATION

4.7.1 Parts Certification

For parts that are required to be reported in IMDS according to section 4.1, the **Ford Certification page must be completed in IMDS by December 31, 2018**. It is the supplier's responsibility to assure that the person certifying is of the appropriate authority for the supplying company.

By certifying in IMDS, suppliers are giving an assurance that their parts are in compliance with the substance prohibitions in this version of the Ford Restricted Substance Management Standard (WSS-M99P9999-A1).

To be able to perform the Ford Motor Company Certification in IMDS, the appropriate user must have a "Certifier" profile set up in their IMDS account. This profile is assigned by the suppliers "IMDS Client Manager".

4.7.2 Non-dimensional Materials Certification

All non-dimensional production material suppliers must certify compliance to RSMS in GMAP-e1291 no later than **December 31, 2018**. Certifiers must have access to the Covisint website. By certifying RSMS in GMAP-e1291, the supplier is taking the responsibility that their materials comply with the requirements in the latest issue of the RSMS.

If suppliers have both non-dimensional materials and dimensional materials (parts), the suppliers must certify in both the IMDS and GMAP-e1291 sites.

**Suppliers that are not registered for Covisint and/or do not have access to the "Ford Supplier Portal"** should do so immediately using <https://us.register.covisint.com/CommonReg?cmd=REGISTER> to register for Covisint. Follow the registration steps, and make sure to select **"Ford Supplier Portal"** at the service



package screen. When asked to enter the GSDB code, please enter your four digit Parent GSDB code.

- 4.7.3 Section Removed. REACH Confirmation is combined with RSMS Certification.  
<<https://portal.covisint.com>>

## 5. GENERAL INFORMATION

- 5.1 A glossary of terms is provided in Appendix 1.
- 5.2 Additional information may be obtained through the activities shown in Appendix 2.
- 5.3 Matrix to clarify the appropriate reporting mechanism for suppliers concerning material and substance content reporting is provided in Appendix 3.
- 5.4 Because GADSL was developed to only address dimensional products (materials) used in production, divergences exist between the RSMS and GADSL. The RSMS covers requirements for both dimensional and non-dimensional materials. For this reason, the RSMS has been improved to separate out restriction and declaration requirements for dimensional and non-dimensional materials. Please see Attachment 2 for substance requirements related to dimensional products. Please see Attachment 3 for substance requirements related to non-dimensional products. Table 1 has been removed. If you would like to see the full combined list for all products you can request the full Restricted Substance List by contacting [kkelle17@ford.com](mailto:kkelle17@ford.com).

Please note that any PII (Personally Identifiable Information) that you provide in IMDS and the GMM Supplier Portal to Ford Motor Company will be stored and processed in Ford of North America (Dearborn, Michigan).

- 5.5 All suppliers are required to provide substance notification or meet material reporting requirements according to reporting rules such as the US EPA TSCA Inventory Notification (Active/Inactive) Rule and to the EU REACH Communication Rule (§ 33).





## APPENDIX 1 Glossary of Terms

These terms are used by Ford in this Standard in the sense of following examples of legal definitions, not excluding other legally binding definitions:

### ARTICLE:

The definition provided by the US Occupational Safety and Health Administration (OSHA):  
[http://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=standards&p\\_id=](http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=standards&p_id=)

The definition provided by TSCA:  
[http://www.epa.gov/oppt/cdr/tools/ArticlesFactSheetforCDR%20Reporting\\_080312.pdf](http://www.epa.gov/oppt/cdr/tools/ArticlesFactSheetforCDR%20Reporting_080312.pdf)

The definition provided by REACH – See Article 3 Section 3 at the following website:  
[http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32006R1907R\(01\):EN:NOT](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32006R1907R(01):EN:NOT)

### BIOCIDES:

Additives intended to prevent or restrict microbiological growth.

### CARCINOGENS:

**Carcinogens are substances, mixtures and materials that have the potential of causing cancer by exposure through any route and/or those classified as carcinogens by any applicable regulation.**

**Examples (not comprehensive):**

- 1) Any member of Group 1, 2A, or 2B in the latest edition of Monographs of the International Agency for Research on Cancer (IARC).
- 2) Any "select carcinogen" listed by the United States Occupational Safety and Health Administration (refer to 29 CFR Part 1910, Subpart Z, Toxic and Hazardous Substances).
- 3) Any "known carcinogen" or substance "reasonably anticipated to be a carcinogen" by the United States National Toxicology Program (NTP) in the latest edition of Annual Report on Carcinogens.
- 4) Any "A1", "A2" or "A3" carcinogen listed by the American Conference of Governmental Industrial Hygienists (ACGIH) in the latest edition of *Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*.
- 5) Any substance/mixture listed as carcinogen in EU – CLP Regulation No. 1272/2008 Annex VI ([http://ec.europa.eu/enterprise/sectors/chemicals/documents/classification/index\\_en.htm](http://ec.europa.eu/enterprise/sectors/chemicals/documents/classification/index_en.htm)).
- 6) Any chemical known to the State of California to cause cancer, pursuant to The Safe Drinking Water and Toxic Enforcement Act of 1986 ("Proposition 65"), <http://www.oehha.ca.gov/prop65.html>.

### CLASSIFICATION:

#### DECLARABLE:

Substances are designated "Declarable" (D) when present in a material, or part in a vehicle, and are legally regulated, projected to be regulated or required to be tracked for information gathering purposes. Monomers, catalysts and accelerators remaining in cured polymeric articles (including paints) as residual content need not be reported at less than 0.1% by weight per homogeneous material, unless subject to explicit threshold content limits specified by this standard (e.g. vinyl chloride). Thresholds for heavy metals are to be calculated on the basis of the elemental form of the metal.

**Declarable - All = Declarable in all applications above stated threshold**

#### PROHIBITED:

Substances designated, as "Prohibited" (P) shall not be supplied in any products, subject to the stated directions on content threshold and affected applications. A maximum concentration value of 0.1% by weight of per homogeneous material shall be tolerated for these substances, or subject to specific threshold limits specified by this Standard.

**Prohibited - Some = Prohibited in some applications above stated threshold**

**Prohibited - All = Prohibited in all applications above stated threshold**



## CONFLICT MINERALS:

“**Conflict Minerals**” means:

- (i) Gold as well as columbite-tantalite (coltan), cassiterite, wolframite, or their derivatives, which are limited to tantalum, tin, and tungsten; and
- (ii) Any other mineral or its derivatives determined by the Secretary of State to be financing conflict in the Democratic Republic of the Congo or an adjoining country.

The above minerals are termed conflict minerals regardless of where they are mined, processed, or sold.

## CONGENER:

In chemistry, congeners are related chemicals, e.g., elements in the same group of the periodic table, or derivatives thereof.

## ECOTOXICANTS:

Substances posing recognized hazard to the environment, in general, or to specific ecosystems, including: substances so classified, due to their ecotoxicity, under the provisions of the European EC Regulation 1272/2008 and as classified by ASTM STP 1179, p.34, 1993. Other definitions specific to the country of product sale/use also apply.

## EU ELV (End of Life Vehicle) Directive:

European Union Directive 2000/53/EC on ELV's

[http://europa.eu/legislation\\_summaries/environment/waste\\_management/l21225\\_en.htm](http://europa.eu/legislation_summaries/environment/waste_management/l21225_en.htm)

## FIBER:

Unless otherwise indicated in this Standard, a FIBER is defined as a particle that is five micrometers or longer with an aspect ratio of at least 3 to 1.

## GPDS:

**Global Product Development System** - The process tasks and deliverables necessary to develop and launch a vehicle. Team events and milestones are defined to communicate progress at various points throughout the process.

## GMAP – e1291 SYSTEM:

The Global Materials Approval Process-e1291 System:

<https://fim.covisint.com/ap/ford?TARGET=https://web.emmg.ford.com/e1291/menu/>

## HAZARDOUS:

Hazardous substances/mixture/materials are those that have the capacity of producing human injury or illness by exposure through any route, by creating an adverse effect upon the environment, and/or those defined and listed by any applicable (i.e. Health and Safety, Environmental, and Transportation) regulation.

## HOMOGENOUS MATERIAL:

The physical definition of homogeneity is: the quality of having all properties independent of the position. The compositional homogeneity of any material means: the chemical composition is the same for all substances forming or being an ingredient of the material (e.g. impurities) at any spot of measurement. The opposite: an inhomogeneous material is composed in a way that the amount of the chemical ingredients is dependent on the spot of measurement.

## INTENTIONALLY INTRODUCED:

Deliberately utilized in the formulation of a material or component where its continued presence is desired in the final product to provide a specific characteristic, appearance or quality. The use of recycled materials as feedstock for the manufacture of new products, where some portion of the recycled materials may contain



RSMS-listed substances, are not to be considered as intentionally introduced unless specified by regulation (e.g., sales/use of products in Canada).

## MUTAGENS:

Any chemical that can produce a genetic mutation, i.e., an induction of DNA damage, or changes in chromosome structure or number, including: substances/mixtures classified as Category 1, 2 or 3 mutagens under the provisions of the EC CLP Regulation 1272/2008 (Classification, Packaging and Labeling of Substances and Mixtures).

[http://ec.europa.eu/enterprise/sectors/chemicals/documents/classification/index\\_en.htm](http://ec.europa.eu/enterprise/sectors/chemicals/documents/classification/index_en.htm)

## NANOMATERIAL:

Nanomaterials of interest are those which have structured components with at least one dimension less than 100 nm down to 1 nm, because it is in this range (particularly at the lower end) that materials can have different or enhanced properties compared with the same materials at a larger size. Materials that may be smaller or larger than the nanoscale in all dimensions and exhibit one or more nanoscale property are also considered nanomaterials. These properties, which are attributable to size and their effects, are distinguishable from the chemical or physical properties of individual atoms, individual molecules and bulk material.

## NEW PRODUCTION PARTS:

Newly drawn parts that are not in current production or carried over from another vehicle. Parts that are not considered new parts if only the part number changes, in line with current practices (i.e. the prefix changes to accommodate a model year change, or the suffix changes to accommodate a minor engineering change of a current part).

## OZONE DEPLETING SUBSTANCES (ODS):

Ozone Depleting Substances (ODS) - are defined as chemicals that have been linked to the depletion of the stratospheric ozone layer, and restricted under the 1987 Montreal Protocol, listed by U.S. Environmental Protection Agency regulations under 40 Code of Federal Regulations, Part 82, Appendix F to Subpart A, and addressed by the European Union Directive-1005/2009/EC, chemicals are collectively identified as ozone depleting substances (ODSs) and include CFCs (chlorofluorocarbons), HCFCs (hydrochlorofluorocarbons) and several brominated-carbons including Halons.

## PAH (Polycyclic-aromatic hydrocarbons):

Regulations prohibiting the use of PAH include EU-R 1907/2006 and its amendments and Directive 2005/69/EC:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2005:323:0051:0054:EN:PDF> and <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:328:0069:0071:EN:PDF>

These limits are regarded as kept, if the PAH extract is <3% by mass, as measured by the Energy Institute standard EI-346.

## PERCENT (%) BY WEIGHT (of a substance contained in a material)

$$\frac{\text{Mass Substance} \cdot 100}{\text{Mass Material}} = \text{Percent Weight}$$

## POLYMERIC:

Non-metallic materials, including plastics, elastomers, wood and cardboard. This includes:

- All injection molded, blow-molded and heat-pressed thermoplastic parts (PP, ABS, PA, PVC, etc.)
- All molded thermoset parts (UP, PUR)
- All foamed plastic parts (PUR, EPP, EPS, etc.)

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- Natural and synthetic rubbers (NR, EPDM, etc.)
- Synthetic fibers (Polyester, Polyamide) such as in carpets, package trays, seat covers, seat belts

## PRODUCT(S):

The entity that is supplied to Ford, which can be an assembly, part (component), sub-component, material, or substance. This could include the restricted substance itself (e.g. lead sulfide), a material containing the restricted substance (e.g. a friction material containing lead sulfide), or a component or assembly containing the restricted substance (e.g., a brake assembly with a lead-containing friction material).

## REACH:

REACH (Registration, Evaluation, Authorization and Restriction of Chemicals; EU Regulation 1907/2006/EC)  
[http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32006R1907R\(01\):EN:NOT](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32006R1907R(01):EN:NOT)

## RECYCLED CONTENT:

The portion of a material's or product's weight that is composed of materials that have been recovered from or otherwise diverted from the scrap stream, either from the manufacturing process (PIR) or after consumer use (PCR). Recycled content consists of PIR and PCR, but not home scrap.

- Post-Industrial Recyclates (PIR): Scrap which is a by-product of the manufacturing process (excluding home scrap) and is re-used in the manufacture of the part.
- Home Scrap: Material commonly reused by the industry within the original manufacturing process. Examples include materials which are re-granulated and re-fed within a facility. Home scrap is not considered recycled content.
- Post-Consumer Recyclates (PCR): Scrap generated by consumers which has been re-used in the manufacturing of a new part. Examples are used pop bottles which are reused to make grill opening panels, or used bumpers which are re-made into new bumpers.

Reporting of recycled content:

- Only the weight of the recyclate within the component or assembly should be reported. Do not report the component or assembly weight as recycled content. This weight is reported and totaled separately.
- For PCR only, suppliers do not have to report "Declarable" substances unless otherwise specified, although suppliers must report any substances that are listed in this Standard as "Prohibited" or "Prohibited above threshold".

## REPRODUCTIVE TOXICANTS:

Substances /mixtures or other agents which may affect male or female fertility, cause damage to the unborn or newborn child, or provoke miscarriage, including:

- 1) Any chemical known to the State of California to cause reproductive harm or birth defects, pursuant to The Safe Drinking Water and Toxic Enforcement Act of 1986 ("Proposition 65")  
<http://www.oehha.ca.gov/prop65.html>.
- 2) Substances/mixtures classified as Category 1, 2 or 3 due to adverse effects on fertility, or their developmental toxicity under the provisions of the EC CLP Regulation 1272/2008  
[http://ec.europa.eu/enterprise/sectors/chemicals/documents/classification/index\\_en.htm](http://ec.europa.eu/enterprise/sectors/chemicals/documents/classification/index_en.htm)

## SENSITIZERS:

Substances which have been identified as confirmed or potential sensitizers by animal experimentation or human experience include but are not limited to chemicals which:

- 1) Cause a "substantial proportion of exposed people or animals to develop an allergic reaction in normal tissue after repeated exposure to the chemical" (refer to Occupational Safety and Health Administration Standard, 29 CFR 1910.1200).
- 2) Cause on "normal living tissue through an allergic or photodynamic process a hypersensitivity which becomes evident on reapplication of the same substance" (refer to Federal Hazardous Substances Act 16 CFR 1500.3(b) (9)).



- 3) Are classified as inhalation or contact sensitizers under the provisions of the EC CLP Regulation 1272/2008 ([http://ec.europa.eu/enterprise/sectors/chemicals/documents/classification/index\\_en.htm](http://ec.europa.eu/enterprise/sectors/chemicals/documents/classification/index_en.htm))
- 4) Are classified as such according to the World Health Organization "criteria for classification of skin and airway sensitizing substances in the work and general environments" (1996).

**SERVICE KITS**

Service Kits are post-production service parts/materials necessary for vehicle maintenance or repair that are packaged for customer convenience.

**SUBSTANCE:**

The basic chemical or chemical compound listed in this Standard, e.g., lead or lead sulfide.

**STATISTICAL AVERAGE:**

The statistical average is determined by calculating the arithmetic mean:

$$\bar{x}_{\text{arithm}} = \frac{1}{n} \sum_{i=1}^n x_i = \frac{x_1 + x_2 + \dots + x_n}{n}$$

where, n represents the number of measurements (observations) and x represents the measured values.

**TOXICOLOGY NUMBER (TOX NUMBER):**

A unique worldwide six-digit number issued at the beginning of the material review process upon receipt of product chemistry and MSDS for (production, non-production, and post-production) materials, and hazardous articles. It alone does not indicate if a product has received Comprehensive Material Clearance for use at any facility.

**TYPE APPROVAL:**

"Type-approval (Directive 2007/46/EC) means the procedure whereby a legal or regulatory agency in the name of a European Member State certifies that a type of vehicle satisfies the relevant technical requirements. If a phase-out is required for vehicles type approved after a certain date this refers to the initial whole vehicle type approval of a certain vehicle - this is typically around the <MP1> (Job 1) date. Type approval is the prerequisite for any registration of vehicles in the intended European markets. (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:263:0001:0160:EN:PDF>). Part of the whole vehicle type approval is also material and substance compliance."



APPENDIX 2 - FORD INFORMATION CONTACTS

**TOXICOLOGY/OCCUPATIONAL HYGIENE**

Ford European Toxicology Group  
GB-1/165  
Ford Motor Company Ltd.  
Central Office, Eagle Way  
Warley, Essex CM13 3BW  
England  
Telephone: 44-(0) 1277-251485  
Fax: 44-(0) 1277-253066

Ford North American Toxicology Group  
Ford Motor Company  
World Headquarters, 0531  
One American Road  
Dearborn, MI 48126  
U.S.A.  
Telephone: 1-(313) 322-4408  
Fax: 1-(313) 594-2501

Ford Asia Pacific OHS  
Ford Motor Company AP Headquarter  
211 Century Avenue, Pudong New District  
Shanghai 200120, China  
Telephone: +86-21-20322788  
Fax: +86-21 38581526  
Email: [apatox@ford.com](mailto:apatox@ford.com)

Ford Motor Company for South America  
Sao Paulo, Brazil  
Telephone: 55-11-4174-8229 or 8193  
Fax: 55-11-4174-9872

**ENVIRONMENTAL**

Environmental Quality Office, Europe  
GB 1/286 Eagle Way  
Warley  
Brentwood  
CM13 3BW  
Telephone: 44 -1277- 251221  
Fax: 44-1277-252833

Environmental Quality Office  
Ford Motor Company  
290 Town Center Dr. Suite 807E  
Fairlane Plaza North  
Dearborn, MI 48126 USA  
Telephone: 1-(313) 322-1226  
Fax: 1-(313) 248-5030

**RECYCLING PLANNING**

Emissions and Recycling Planning  
Ford Motor Company  
World Headquarters, 217-A1  
One American Road  
Dearborn, MI 48126  
U.S.A.  
Telephone: 1-(313) 594-3458

Vehicle Recycling  
Ford-Werke GmbH  
E479/W03  
D-50725 Köln (Niehl)  
Germany  
Telephone: 49-(0)221-9016202  
Fax: 49-(0)221-9013458

**Ford Customer Service Post Production Regional Contacts**

Asia Pacific:	Contact Name: Catherine Huang	Email: <a href="mailto:chuan144@ford.com">chuan144@ford.com</a>
Europe:	Contact Name: Peter Verse	Email: <a href="mailto:pverse@ford.com">pverse@ford.com</a>
Middle East and Africa	Contact Name: Joseph Kgoroba	Email: <a href="mailto:tkgoroba@ford.com">tkgoroba@ford.com</a>
North America	Contact Name: Dave Lozier	Email: <a href="mailto:dlozier@ford.com">dlozier@ford.com</a>
South America	Contact Name: Renan Beca	Email: <a href="mailto:rbeca@ford.com">rbeca@ford.com</a>

**FOR INTERNATIONAL MATERIAL DATA SYSTEM (IMDS) INFORMATION:**

Materials Engineering & Testing, Body Engineering  
Ford-Werke GmbH, Henry-Ford Strasse 1  
D-50725 Köln (Niehl)  
Germany  
Telephone: 49-(0)221-9013429  
Email: [sriewer1@ford.com](mailto:sriewer1@ford.com); [swernec1@ford.com](mailto:swernec1@ford.com)

**Other regions should contact these numbers:**

Global Materials & Standards Engineering  
Ford Motor Company  
15000 Century Drive  
Dearborn, MI 48120-1267  
U.S.A.  
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RESTRICTED SUBSTANCE MANAGEMENT STANDARD

APPENDIX 3 – REPORTING MATRIX

The purpose of the Reporting Matrix is to clarify the appropriate reporting mechanism for suppliers concerning material and substance content in products supplied to Ford Motor Company. Please refer to the "Definitions" (Appendix 1) for explanation of the material categories listed in the Reporting Matrix. The material examples listed are for **illustrative purposes only** and do not represent a complete listing. The acronym, "IMDS" indicates reporting via the International Material Data System, which was previously discussed in Section 4 of this Standard. The acronym, "GMAP-e1291" indicates reporting via the **Ford Approval Process**, which involves submission of complete supplier material information including Material Safety Data Sheet (MSDS) physical-chemical data, and material certifications through the GMAP-e1291 system (where applicable). Products receiving Ford approval will be issued a Ford Toxicology/Ford Internal Reference (FIR) Number. For further details regarding the **Ford Approval Process** and affected materials, please contact the appropriate *regional* Ford Toxicology (TOX) or Environmental Quality Office (EQO) listed in Appendix 2. Non-dimensional materials (chemical products) contained on or in vehicle parts in a manner that is known or reasonably anticipated to pose a health or environmental hazard during normal handling, use, service or disposal are subject to separate detailed evaluation and clearance by Ford Toxicology and the Environmental Quality Office (see Section 3.0), in addition to IMDS reporting requirements.

	Production Material	Non-Production Material	Post-Production Material
<b>Dimensional Material</b>	<b>IMDS:</b> Report all parts remaining on the vehicle at point of sale. Cured paints and adhesives are dimensional materials and must be included in the assembly data.	<b>IMDS:</b> Not applicable  <b>Use Attachment 1:</b> Facility equipment, assembly aides	<b>IMDS:</b> Report all Service (aftermarket) parts according to requirements listed in Section 4.
	<b>GMAP-e1291:</b> Welding rods/ wires, dry friction materials must also be reported in IMDS	<b>GMAP-e1291 :</b> Welding rods/ wires, and solder used within Ford facilities for non-production applications	<b>GMAP-e1291 :</b> In addition to IMDS reporting requirements, dry friction materials (i.e. Brake pads, manual trans. clutch pads)
<b>Non-dimensional Material</b>	<b>IMDS:</b> Non-dimensional materials that are contained in parts must also be included in the IMDS data. For these materials please include the appropriate Ford Material Specification, Tox/FIR Numbers and GADSL-listed substances.	<b>IMDS:</b> Not Applicable	<b>IMDS:</b> Non-dimensional materials that are contained in parts must also be included in the IMDS data. For these materials please include the appropriate Ford Material Specification, Tox/FIR Numbers and GADSL-listed substances.
	<b>GMAP-e1291:</b> In addition to any IMDS reporting requirements, all fluids, gases, pastes, powders, <i>uncured</i> paints/ sealants/ adhesives	<b>GMAP-e1291:</b> All fluids, gases, pastes, powders, <i>uncured</i> paints/ sealants/ adhesives	<b>GMAP-e1291:</b> In addition to any IMDS reporting requirements, all fluids, gases, pastes, powders, <i>uncured</i> paints/ sealants/ adhesives

SUPPLIER RESTRICTED SUBSTANCE INFORMATION REPORTING FORM FOR  
**NON-PRODUCTION DIMENSIONAL MATERIALS/PACKAGING MATERIALS/OFFICE MATERIALS, WSS-M99P9999-A1**

(ATTACHMENT 1)

Supplier Name: \_\_\_\_\_  
 Global Supplier Data Base (GSDB) Code: \_\_\_\_\_  
 Supplier Contact: \_\_\_\_\_  
 Supplier Phone: \_\_\_\_\_ Ext: \_\_\_\_\_  
 Supplier Email: \_\_\_\_\_  
 Supplier Part Number: \_\_\_\_\_

Supplier FAX Number: \_\_\_\_\_

Supplier Part Description: \_\_\_\_\_

Ford Motor Company Engineering Contact: \_\_\_\_\_

Phone Number: \_\_\_\_\_

**INSTRUCTIONS:** The above item (by part number) contains the following substance(s) listed in the current version of the Ford Engineering Material Standard. Ford Motor Company WSS-M99P9999-A1 policy requires that suppliers disclose listed substance information related to the product supplied. Products, for which full disclosure of ingredients has been supplied to Toxicology according to Section 3.0 of the Standard, do not require additional reporting.

Suppliers of facility equipment, machinery, and tooling (e.g., conveyers, presses etc.), packaging materials, office materials and any sub-components contained therein, must utilize this form to submit information listed below including: 1) the name of the Production Line Equipment **TOOLING AFFECTED** that the sub-component part services, 2) if the part comes into direct contact with **EMPLOYEE** as a matter of routine use, 3) if the part contacts any material/part integral to the vehicle or other equipment that does so (i.e., affects **MARKETS**) and 4) if the part is a **MAINTENANCE** part that is periodically replaced and disposed. Suppliers of Facility equipment, or assembly aides whose main component contains no "sub-components", also utilize this form. **PLEASE COMPLETE AND RETURN THIS FORM VIA FAX OR EMAIL TO NORTH AMERICAN GLOBAL MATERIALS & STANDARDS ENGINEERING:** FAX 1-313-322-1614 or email [RSMSstat@ford.com](mailto:RSMSstat@ford.com). The electronic version of this form is accessible at <https://us.library.covisint.com/PublicDocViewer?nodeID=2179>

**REQUEST FOR ACKNOWLEDGEMENT:** The above item (by part number) contains the following substance(s) listed in **WSS-M99P9999-A1**.

Ford Motor Company will acknowledge receipt of this report

**I CERTIFY THAT THE ITEM(S) IDENTIFIED ON THIS FORM COMPLY WITH WSS-M99P9999-A1**

Form completed by: \_\_\_\_\_

Department: \_\_\_\_\_

Date: \_\_\_\_\_

Equipment / Tooling Supplier	Sub-Component Information									Check all affected		
	Detailed Supplier Part/Spec Numbers <sup>1</sup>	Supplier Part/Product Name	Part Weight (kg) <sup>2</sup>	Material Name	Material Std No.	Material Weight (kg) <sup>3</sup>	Listed substance by CAS No. <b>AND</b> chemical name in Material/Part	Listed Substance Weight (kg)	Primary Purpose or Use of Listed Substance	EMPLOYEES	MARKETS	MAINTENANCE

Ford Motor Company Acknowledgment: \_\_\_\_\_

Date: \_\_\_\_\_

- (1) Supplier Part/Specification number used by Ford for procurement.
- (2) Report the weight (in kilograms) of the part supplied containing the listed substance.
- (3) Report the weight (in kilograms) of the material containing the listed substance.

*Submit additional signed copies of this form as necessary for additional Equipment/Tooling Suppliers*



## RSMS Attachment 2: Substance Restrictions Affecting \*Dimensional Materials

\*Dimensional materials are those having their own shape and are essentially solid. Most are considered "articles" (See definition of "Article"). Examples of these materials would include assemblies, components, semi-components and hard parts.

RSMS Row Number	Substance Category	Classification (Restriction Level)	Applications Affected (Comments)	Threshold (Percent)	Effective Date
0	All GADSL Listed Substances	P/D	ALL DIMENSIONAL AND NON-DIMENSIONAL MATERIALS ARE SUBJECT TO GADSL GUIDELINES LISTED AT <a href="http://www.gadsl.org">http://www.gadsl.org</a>  BLANK APPLICATION COLUMN IN GADSL IMPLIES "ALL PRODUCTS"	SEE GADSL;  ADDITIONAL OR MODIFIED REQUIREMENTS TO GADSL ARE LISTED BELOW	
0.1	ADDITIONAL OR MODIFIED REQUIREMENTS TO GADSL  Rows listed in the RSMS are only those that differ from GADSL. Rows that are hidden/missing are identical to GADSL. Both the rows included in the RSMS and those listed in GADSL are subject to RSMS disclosures. For a FULL LISTING of all substances with CAS#,s, see the GADSL and RSL (ww).	P/D	Applications affected, additional substances, and/or differences in classifications beyond GADSL are listed in the RSMS and affect both DIMENSIONAL and NON-DIMENSIONAL MATERIALS as specified.		Immediate
0.2	ALL substances must be declared if present at or above 0.1%, unless lower threshold is listed (ww) (iii). All substances in use that are listed as prohibited or prohibited-some but don't meet the prohibition criteria (i.e. below the threshold or not used in an affected application) must be declared at any concentration. Please contact RSMSHELP@ford.com if there are questions regarding declaration limits.	D	All Products		Immediate
1	Azo dyes that form carcinogenic amines and carcinogenic amines formed from azo dyes	P			
1.1	Azo dyes that form carcinogenic amines and carcinogenic amines formed from azo dyes	P	Textiles and leather	0.002% for China GB listed substances  0.003% for EU listed substances	Immediate
1.2	Azo Dyes that Form Carcinogenic Amines	P	All Products	0.1%	Immediate
1.3	Misc. Dyes, Pigments and Colorants (Select CAS) (ww)	P	Textiles and Leather	0.003%	Immediate
2	Ammonium salts (inorganic)	P	Cellulose Insulation Mixtures and Cellulose Insulation Articles - Emission of Ammonia results in a concentration greater than 3ppm by volume (www)	(www)	Immediate
3	Aromatic amines or their salts	P			
3.1	Benzidine its derivatives and salts (Select CAS) (ww)	P	All Products	0% (c)	Immediate
4	Arsenic and its compounds	P			
4.1	Arsenic compounds (Select CAS) (ww)	P	All Products	0.1%	Immediate

## RSMS Attachment 2: Substance Restrictions Affecting \*Dimensional Materials

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5	Asbestos	P			
5.1	Asbestos forms - Fibers	P	All Products (e.g. including Dry Friction Materials, etc.)	0% (xxx)	Immediate
5.2	Asbestos forms - Minerals - all members	P	All Products with potential to form Asbestos Fibers (e.g. including Dry Friction Materials, etc.)	0% (xxx)	
6	Benzene				
6.1	Benzene - non-fuel products	P	All products except when present as a fuel constituent (covered by regional specifications/regulations) or when present in aftermarket consumer cleaning products	0.1%	Immediate
7	Benzidine-based substances (Select CAS) (ww)	P			
7.1	Benzidine Based Chemical Substances (40 CFR 721.1660, Table 1) (Select CAS) (ww)	P	All Products	0% (i)	Immediate
7.2	Benzidine Based Chemical Substances (40 CFR 721.1660, Table 2) (Select CAS) (ww)	P	All Products other than Reagent used to test for H <sub>2</sub> S or HCN, as a stain in microscopy or as an analytical standard	0% (i)	Immediate
8	Biocidal products (kkk)	P	Products for use in the EU containing biocidal substances that are not approved for one or more product type specified in Annex V of the BPR or where approvals have expired	0% (i)	Immediate
9	Brominated flame retardants Note: Separate entries/classifications exist for the following members of this group: Polybrominated diphenyl ethers [PBDE]	P			
9.1	Hexabromo-cyclododecane (HBCD)	P	All Products	0% (i)	Immediate
9.2	Polybrominated biphenyls (PBB)	P	All Products	0% (i)	Immediate
9.3	Tris(2,3-dibromopropyl)phosphate [TRIS]	P	Textiles intended to come into contact with skin	0% (i)	Immediate
11	Butylphenol(2(2H-1,2,3-benzotriazol-2-yl)-4,6-di-tert)-	P	All Products	0% (i)	Immediate
12	Cadmium and its compounds	P	(qqq)		
12.1	Cadmium and its compounds	P	Cadmium Plating in vehicle and non-vehicle applications	0% (i)	Immediate

## RSMS Attachment 2: Substance Restrictions Affecting \*Dimensional Materials

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12.2	Cadmium and its compounds	P	The following non-vehicle applications: Plastics, low zinc content ( $\leq 10\%$ zinc) paints with codes [3208] & [3209], brazing fillers, packaging materials and homogeneous components of electrical and electronic equipment	0.01%	Immediate
12.3	Cadmium and its compounds	P	All vehicle applications except Cadmium plating and NiCd batteries used as replacement parts for electric vehicles put on the market before 31 Dec 2008	0.01%	Immediate
12.4	Cadmium and its compounds	P	The following non-vehicle applications: High zinc content paints ( $> 10\%$ zinc) with codes [3208] & [3209], painted articles and articles containing recovered PVC (marked with appropriate pictogram) (q)	0.1%	Immediate
12.5	Cadmium and its compounds	P	PVC Artificial leather	0.0075%	Immediate
13	Canadian Chemical Regulations	P			
13.1	Canadian Chemical Challenge Program Substances Phase I (Select CAS) (ww)	P	See Specific Substance Rows for Applications Affected (ww) (ccc)	0% (i)	Immediate
13.2	Non-Challenge and Other Initiatives (Select CAS) (ww)	P	See Specific Substance Rows for Applications Affected (ww) (ccc)	0% (i)	Immediate
14	Chlorinated Alkanes/Alkenes	P			
14.1	Short-Chain Chlorinated Alkanes/Alkenes (SCCA)	P			
14.11	Short-Chain Chlorinated Alkanes/Alkenes (SCCA) defined as $C_nH_xCl_{(2n+2-x)}$ where $n=10$ to $13$ including substances where any portion falls within the SCCA definition	P	All Products	0% (i)	Immediate
14.12	Short-Chain Chlorinated Alkanes (SCCA) defined by Regulation rather than formula (Select CAS) (ww)	P	All Products - unless SCCA content is affirmed to be 0% (k)	0% (i)	Immediate
14.2	Mid-Chain Chlorinated Alkanes (MCCA: C14-C17) and Long-Chain Chlorinated Alkanes (LCCA: C18-C20)	P	All Products - unless SCCA content is affirmed to be 0% (k)	0% (i)	Immediate
14.3	Very Long-Chain Chlorinated Alkanes (vLCCA: C $>20$ ) or Chlorinated Alkanes of an Unspecified Chain Length	P			
14.31	Very Long-Chain Chlorinated Alkanes (vLCCA: C $>20$ ) (Select CAS) (ww)	P	All Products	0% (i)	Immediate

## RSMS Attachment 2: Substance Restrictions Affecting \*Dimensional Materials

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14.32	Very Long-Chain Chlorinated Alkanes(vLCCA: C>20) or Chlorinated Alkanes of an Unspecified Chain Length	P	All Products - unless SCCA content is affirmed to be 0% (k)	0% (i)	Immediate
14.4	Substances related to chlorinated alkanes that might contain Short Chain Chlorinated Alkanes/Alkenes (SCCAs)	P	All Products - unless SCCA content is affirmed to be 0% (k)	0% (i)	Immediate
15	Chlorinated Ethers (Select CAS) (ww)	P			
15.2	Chloromethyl methyl ether (CMME)	P	All Products	0% (i)	Immediate
15.3	NCC ether	P	All Products	0% (i)	Immediate
16	Chlorinated Hydrocarbons (Select CAS) (ww)	P			
16.1	Chlorinated Hydrocarbons (Select CAS) (ww)	P	All Products	0% (i)	Immediate
16.2	Chlorinated Hydrocarbons (Select CAS) (ww)	P	All Products	0.1%	Immediate
16.3	Chlorinated Hydrocarbons (Select CAS) (ww)	P	Any consumer product, except for use in cleaners and solvent degreasers, film cleaners, hoof polishes, lubricants, mirror edge sealants, and pepper spray	0%(i)	Immediate
17	Chlorinated or brominated Dioxins or Furans	P	All Products	0% (i)	Immediate
18	Chlorinated Naphthalenes	P	All Products	0% (i)	Immediate
19	Chromium(VI) (Cr+6; Hexavalent) and its compounds	P			
19.1	Chromium(VI) (Cr+6; Hexavalent) and its compounds	P	All Products except cement additives and leather articles	0.1% (m)	Immediate
19.3	Chromium(VI) (Cr+6; Hexavalent) and its Compounds	P	Leather articles	0.0003%	Immediate
20	Copper, metallic and its compounds	P			
20.1	Copper, metallic and its compounds	P	Brake Friction Materials	5%	1-Jan-2021
20.2	Copper, metallic and its compounds	P	Brake Friction Materials	0.5%	1-Jan-2025
21	Dichloro-diphenyl-trichloro-ethane (DDT)	P	All Products	0% (i)	Immediate
23	Fluorinated Gases (Select CAS) (ww)	P			

## RSMS Attachment 2: Substance Restrictions Affecting \*Dimensional Materials

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23.1	Fluorinated Gases (Select CAS) (ww)	P	All applications in the United States other than the following uses: 1. As a refrigerant in new vehicle air conditioning systems in new vehicles 2. Recharging of vehicle air conditioning systems by the OEM (where the substance was originally incorporated into the vehicle system) 3. Consumer products used to recharge the vehicle air conditioning systems where the substance was originally used to charge the system by the OEM	0% (i)	Immediate
23.3	Fluorinated Greenhouse Gases with Global Warming Potential (GWP) >150	P	Vehicle refrigerants or refrigerant blends in all M1 or N1 Class I vehicles produced for Europe; Tires in EU	0% (i)	Immediate
23.4	Hydrofluorocarbons with Global Warming Potential (GWP) >150	P	Technical aerosols and foams in EU (y)	0% (i)	Immediate for technical aerosols; 1-Jan-2020 for extruded polystyrene foams; & 1-Jan-2023 for other foams
23.5	Fluorinated Greenhouse Gases with a GWP ≤150 or an unpublished GWP	P	Tires in EU	0% (i)	Immediate
23.6	Perfluorocarbons and HFC-23 (Select CAS) (ww)	P	Fire protection systems and fire extinguishers in Europe	0% (i)	Immediate
23.7	Fluorinated Gases with a Global Warming Potential of ≥2500	P	Stationary refrigeration equipment (future prohibition - see effective date) (r) - except servicing existing equipment where legally permitted	0% (i)	1-Jan-2020
24	Formaldehyde (Free)	P			
24.2	Formaldehyde (Free)	P	Manufacture, import, sales, storage, transport and use for textiles and softener for leather processing	1.0%	Immediate
24.3	Formaldehyde (Free)	P	Use in textiles	0.003%	1-May-2018
25	Glycols (Select CAS) (ww)	P			
25.1	2-Methoxyethanol (2ME) (ww)	P	All Products (i) except semiconductors	0% (i)	Immediate
25.2	2-Methoxyethanol (2ME) (ww)	P	Semiconductors	0.5%	Immediate

## RSMS Attachment 2: Substance Restrictions Affecting \*Dimensional Materials

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27	Lead and its compounds	P			
27.1	Lead and its compounds (Select CAS) (ww)	P	Paints and products intended for use in paint	0% (i)	Immediate
27.2	Lead and its compounds	P	All products except those specified in CURRENT ELV Annex II [EU-D 2000/53] or RoHS Recast Annex III EU-D 2011/65). Once the ELV Annex II exemption expiration date passes the prohibition is effective immediately regardless of vehicle/type approval date. (ppp, d)	0.1%	Immediate
27.3	Lead and its compounds	P	PVC Artificial Leather	0.0090%	Immediate
28	Mercury and its compounds	P	All Products: Some exemptions may exist for facility research applications.	0% (i)	Immediate
31	Nickel and its compounds	P			
31.1	Nickel and its compounds	P	Dry Friction Materials (e.g. brake and clutch pads)	0.1% (d)	Immediate
31.2	Nickel and its compounds	P	Component surfaces likely to be routinely touched, e.g., handles and buckles	0.5 ug/cm2/week (Ni release rate threshold) (aa)	Immediate
32	N-Nitrosamines/N-Nitrosamides and Nitrosating agents	P			
32.2	N-Nitrosodimethylamine, which has the molecular formula C2H6N2O	P	All Products	0% (i)	Immediate
35	Organo-Tin compounds	P			
35.1	Diorgano-Tin compounds (e.g. dialkyl-tin compounds)	P			
35.11	Dibutyltin (DBT)	P	All Products for supply to general public	0.1% (hhh)	Immediate
35.13	Diocetyl tin (DOT)	P	The following articles intended for use by the general public: 1) textiles, gloves, footwear or part of footwear intended to come into contact with the skin; and 2) wall and floor coverings 3) Two component room temperature vulcanization molding kits (RTV-2 molding kits)	0.1% (hhh)	Immediate
35.2	Triorgano-Tin compounds	P			
35.21	Tributyltin compounds	P	All products	0% (i)	Immediate

## RSMS Attachment 2: Substance Restrictions Affecting \*Dimensional Materials

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35.22	Other triorganotin compounds (not tributyl tins)	P	All articles (including vehicle related parts)	0.1% (hhh)	Immediate
36	Ozone Depleting Substance (see definition in Appendix 1 of RSMS)	P			
36.1	Ozone Depleting Substances (Class I), Montreal Protocol: Annex A: All, Annex B: All, Annex C: Groups II and III & Annex E)	P		0% (i)	Immediate
36.11	Ozone Depleting Substances (Class I), Montreal Protocol: Annex A: All, Annex B: All, Annex C: Groups II and III & Annex E)	P	All Products	0% (i)	Immediate
36.12	Ozone Depleting Substances (Class I), Montreal Protocol: Annex A: All, Annex B: All, Annex C: Groups II and III & Annex E) Select CAS (ww)	P	All Products - except those used to service existing equipment where legally permitted	0% (i)	Immediate
36.2	Ozone Depleting Substances (Class II): Montreal Protocol Annex C Group I (HCFCs)	P	All Products - except those used to service existing equipment where legally permitted	0% (i)	Immediate
37	Perfluoroalkyl compounds (Includes: Perfluoroalkyl sulfonates e.g., PFAS, fluorotelomers, and telomere-based polymeric substances)	P			
37.1	Perfluoroalkyl sulfonates (PFAS) (Select CAS) (ww)	P	Carpets and non-dimensional Products	0% (i)	Immediate
37.3	Perfluorooctane sulfonic acid (PFOS) and its derivatives C8F17SO2X (X = OH, Metal salt (O-M+), halide, amide, and other derivatives including polymers)	P	All Products	0% (i)	Immediate
38	Pentachlorophenol (PCP) its salts and esters	P	All Products	0% (i)	Immediate
39	Phthalates	P			
39.1	Phthalates (Select CAS) (ww)	P	All Products (o)	0% (i)	Immediate
39.2	Phthalates (Select CAS) (ww)	P	All Products	0.1%	Immediate
39.3	Phthalates (Select CAS) (ww)	P	All Products (subject to future REACH Authorisation, see effective date)	0.1%	4-Jan-2019
40	Polybrominated diphenyl ethers (PBDE)	P	All Products	0% (i)	Immediate
41	Polychlorinated biphenyls (PCB)	P	All Products	0% (i)	Immediate
42	Polychlorinated terphenyls (PCT)	P	All Products	0% (i)	Immediate
43	Polycyclic aromatic hydrocarbons (PAH; PCAH)	P			
43.4	Polycyclic aromatic hydrocarbons (PAH; PCAH) (Select CAS) (ww)	P	Accessible Plastic or rubber parts (gg, eee, fff)	0.0001%	Immediate

## RSMS Attachment 2: Substance Restrictions Affecting \*Dimensional Materials

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43.5	Polycyclic aromatic hydrocarbons (PAH; PCAH) (Select CAS) (ww)	P	Accessible plastic or rubber parts for industrial uses and for supply to the general public(eee,fff)	0.0001% BaP and 0.001% total listed PAHs	Immediate
43.6	Polycyclic aromatic hydrocarbons (PAH; PCAH) (Select CAS) (ww)	P	Deadener pads supplied to APA region (fff)	0.002% BaP and 0.02% the sum of other listed PAHs (ggg)	Immediate
44	Products of Endangered Species	P	All Products	0% (i)	Immediate
45	Radioactive isotopes and substances, all members	P	All Products, including scrap metal contaminants. Excludes substances and devices used in the manufacturing process	(jj)	
46	REACH Authorization List (Annex XIV) Substances (Select CAS) (ww)	P			
46.1	REACH Authorized Substances (Select CAS) (ww)	P	All Products	0.1%	Immediate
46.2	Upcoming REACH Authorizations (Select CAS) (ww)	P	All Products (subject to future REACH authorisation, see effective date)	0.1%	Varies
47.5	Monomethyl tetrachlorodiphenyl methane (Ugilec 141)	P	All Products	0% (i)	Immediate
47.6	Monomethyl-dibromo-diphenyl methane bromobenzylbromotoluene, mixture of isomers (DBBT)	P	All Products	0% (i)	Immediate
49	Silica, Crystalline - Quartz	P	Materials used in abrasive blasting	1.0%	Immediate
50	Sulfur Hexafluoride	P	All Products except for high-voltage electrical equipment and electrical switchgear	0% (i)	Immediate
52	Tris-(1-aziridinyl) phosphine oxide	P			
52.2	Tris-(1-aziridinyl) phosphine oxide	P	All textile articles intended to come into contact with the skin	0% (i)	Immediate
53	Vinyl chloride	P			
53.1	Vinyl chloride	P	Vinyl chloride monomer content in the polyvinyl chloride layer of artificial leather	0.0005% (5 ppm as monomer)	Immediate
54	Declarable Substances	D	All Products	(v)	Immediate



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## RSMS Attachment 3: Substance Restrictions Affecting \*Non-Dimensional Materials

\*Non-dimensional materials are those that have no intrinsic shape without containing structure. Examples of these materials are fluids, gases, powders and semi-solids (pastes) like adhesives, greases, paints, bulk chemicals, and separately packaged chemicals in post-production service kits.

RSMS Row Number	Substance Category	Classification (Restriction Level)	Applications Affected (Comments)	Threshold (Percent)	Effective Date
0	All GADSL Listed Substances	P/D	ALL DIMENSIONAL AND NON-DIMENSIONAL MATERIALS ARE SUBJECT TO GADSL GUIDELINES LISTED AT <a href="http://www.gadsl.org">http://www.gadsl.org</a>  BLANK APPLICATION COLUMN IN GADSL IMPLIES "ALL PRODUCTS"	SEE GADSL;  ADDITIONAL OR MODIFIED REQUIREMENTS TO GADSL ARE LISTED BELOW	
0.1	ADDITIONAL OR MODIFIED REQUIREMENTS TO GADSL  Rows listed in the RSMS are only those that differ from GADSL. Rows that are hidden/missing are identical to GADSL. Both the rows included in the RSMS and those listed in GADSL are subject to RSMS disclosures. For a FULL LISTING of all substances with CAS#,s, see the GADSL and RSL (ww).	P/D	Applications affected, additional substances, and/or differences in classifications beyond GADSL are listed in the RSMS and affect both DIMENSIONAL and NON-DIMENSIONAL MATERIALS as specified.		Immediate
0.2	ALL substances must be declared if present at or above 0.1%, unless lower threshold is listed (ww) (iii). All substances in use that are listed as prohibited or prohibited-some but don't meet the prohibition criteria (i.e. below the threshold or not used in an affected application) must be declared at any concentration. Please contact RSMSHELP@ford.com if there are questions regarding declaration limits.	D	All Products		Immediate
0.3	Biologically-Active Materials	P		0.1%	Immediate
1	Azo dyes that form carcinogenic amines and carcinogenic amines formed from azo dyes	P			
1.2	Azo Dyes that Form Carcinogenic Amines	P	All Products	0.1%	Immediate
3	Aromatic amines or their salts	P			
3.1	Benzidine its derivatives and salts (Select CAS) (ww)	P	All Products	0% (c)	Immediate
3.2	4-Amino-biphenyl and its salts	P	All Products	0.1%	Immediate
3.3	Benzidine its derivatives and salts	P	All Products	0.1%	Immediate
3.4	2-Naphthylamine and its salts	P	All Products	0.1%	Immediate
3.5	4-Nitrobiphenyl and its salts	P	All Products	0.1%	Immediate
4	Arsenic and its compounds	P			
4.1	Arsenic compounds (Select CAS) (ww)	P	All Products	0.1%	Immediate

## RSMS Attachment 3: Substance Restrictions Affecting \*Non-Dimensional Materials

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4.2	Arsenic and its compounds	P	Industrial water treatment chemicals or as a wood preservatives, or preventatives against fouling by microorganisms, plants or animals.(p)	0% (i)	Immediate
5	Asbestos	P			
5.1	Asbestos forms - Fibers	P	All Products (e.g. including Dry Friction Materials, etc.)	0% (xxx)	Immediate
5.2	Asbestos forms - Minerals - all members	P	All Products with potential to form Asbestos Fibers (e.g. including Dry Friction Materials, etc.)	0% (xxx)	
6	Benzene				
6.1	Benzene - non-fuel products	P	All products except when present as a fuel constituent (covered by regional specifications/regulations) or when present in aftermarket consumer cleaning products	0.1%	Immediate
6.2	Benzene - aftermarket cleaning products	P	Aftermarket consumer cleaning products for automotive cleaning applications	0.003% (u)	Immediate
7	Benzidine-based substances (Select CAS) (ww)	P			
7.1	Benzidine Based Chemical Substances (40 CFR 721.1660, Table 1) (Select CAS) (ww)	P	All Products	0% (i)	Immediate
7.2	Benzidine Based Chemical Substances (40 CFR 721.1660, Table 2) (Select CAS) (ww)	P	All Products other than Reagent used to test for H <sub>2</sub> S or HCN, as a stain in microscopy or as an analytical standard	0% (i)	Immediate
8	Biocidal products (kkk)	P	Products for use in the EU containing biocidal substances that are not approved for one or more product type specified in Annex V of the BPR or where approvals have expired	0% (i)	Immediate
9	Brominated flame retardants Note: Separate entries/classifications exist for the following members of this group: Polybrominated diphenyl ethers [PBDE]	P			
9.1	Hexabromo-cyclododecane (HBCD)	P	All Products	0% (i)	Immediate
9.2	Polybrominated biphenyls (PBB)	P	All Products	0% (i)	Immediate

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10	2-Butoxy-ethanol	P	All Products listed below for indoor use except: (a) in a manufacturing or processing activity; (b) in a commercial activity as paints or coatings, including automobile refinishing coatings; (c) as a solvent in a laboratory for analysis; (d) in scientific research; or (e) as a laboratory analytical standard. Affected activities may include FCSD, PDCs, and R&S.	See Below (n)	
10.1	2-Butoxyethanol in Automobile Cleaners	P	Automobile Cleaner (not automobile degreasers or internal engine cleaners)	10% (n)	Immediate
10.2	2-Butoxyethanol in Rug or Carpet Cleaners	P	Rug or carpet Cleaner	10% (n)	Immediate
10.3	2-Butoxyethanol in Paint strippers or thinners	P	Paint stripper or thinner	0.5% (n)	Immediate
10.4	2-Butoxyethanol in any other aerosol cleaners	P	Any Other Aerosol Cleaner (products other than automobile degreasers used to degrease and clean glass, floors and other surfaces)	5% (n)	Immediate
10.5	2-Butoxyethanol in any non-aerosol cleaners	P	Any Other Non-Aerosol Cleaner (products other than automobile degreasers used to degrease and clean glass, floors and other surfaces)	6% (n)	Immediate
11	Butylphenol(2(2H-1,2,3-benzotriazol-2-yl)-4,6-di-tert)-	P	All Products	0% (i)	Immediate
12	Cadmium and its compounds	P	(qqq)		
12.2	Cadmium and its compounds	P	The following non-vehicle applications: Plastics, low zinc content (≤10% zinc) paints with codes [3208] & [3209], brazing fillers, packaging materials and homogeneous components of electrical and electronic equipment	0.01%	Immediate
12.3	Cadmium and its compounds	P	All vehicle applications except Cadmium plating and NiCd batteries used as replacement parts for electric vehicles put on the market before 31 Dec 2008	0.01%	Immediate
12.4	Cadmium and its compounds	P	The following non-vehicle applications: High zinc content paints (>10% zinc) with codes [3208] & [3209], painted articles and articles containing recovered PVC (marked with appropriate pictogram) (q)	0.1%	Immediate
13	Canadian Chemical Regulations	P			
13.1	Canadian Chemical Challenge Program Substances Phase I (Select CAS) (ww)	P	See Specific Substance Rows for Applications Affected (ww) (ccc)	0% (i)	Immediate

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13.2	Non-Challenge and Other Initiatives (Select CAS) (ww)	P	See Specific Substance Rows for Applications Affected (ww) (ccc)	0% (i)	Immediate
14	Chlorinated Alkanes/Alkenes	P			
14.1	Short-Chain Chlorinated Alkanes/Alkenes (SCCA)	P			
14.11	Short-Chain Chlorinated Alkanes/Alkenes (SCCA) defined as $C_nH_xCl_{(2n+2-x)}$ where n=10 to 13) including substances where any portion falls within the SCCA definition	P	All Products	0% (i)	Immediate
14.12	Short-Chain Chlorinated Alkanes (SCCA) defined by Regulation rather than formula (Select CAS) (ww)	P	All Products - unless SCCA content is affirmed to be 0% (k)	0% (i)	Immediate
14.2	Mid-Chain Chlorinated Alkanes (MCCA: C14-C17) and Long-Chain Chlorinated Alkanes (LCCA: C18-C20)	P	All Products - unless SCCA content is affirmed to be 0% (k)	0% (i)	Immediate
14.3	Very Long-Chain Chlorinated Alkanes (vLCCA: C>20) or Chlorinated Alkanes of an Unspecified Chain Length	P			
14.31	Very Long-Chain Chlorinated Alkanes (vLCCA: C>20) (Select CAS) (ww)	P	All Products	0% (i)	Immediate
14.32	Very Long-Chain Chlorinated Alkanes (vLCCA: C>20) or Chlorinated Alkanes of an Unspecified Chain Length	P	All Products - unless SCCA content is affirmed to be 0% (k)	0% (i)	Immediate
14.4	Substances related to chlorinated alkanes that might contain Short Chain Chlorinated Alkanes/Alkenes (SCCAs)	P	All Products - unless SCCA content is affirmed to be 0% (k)	0% (i)	Immediate
15	Chlorinated Ethers (Select CAS) (ww)	P			
15.1	Bis(Chloromethyl) ether (BCME)	P	All Products	0% (i)	Immediate
15.2	Chloromethyl methyl ether (CMME)	P	All Products	0% (i)	Immediate
15.3	NCC ether	P	All Products	0% (i)	Immediate
16	Chlorinated Hydrocarbons (Select CAS) (ww)	P			
16.1	Chlorinated Hydrocarbons (Select CAS) (ww)	P	All Products	0% (i)	Immediate
16.2	Chlorinated Hydrocarbons (Select CAS) (ww)	P	All Products	0.1%	Immediate

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16.3	Chlorinated Hydrocarbons (Select CAS) (ww)	P	Any consumer product, except for use in cleaners and solvent degreasers, film cleaners, hoof polishes, lubricants, mirror edge sealants, and pepper spray	0%(i)	Immediate
16.4	Chlorinated Hydrocarbons (Select CAS) (ww)	P	Paint strippers	0.1%	Immediate
16.5	Chlorinated Hydrocarbons (Select CAS) (ww)	P	Cleaning products (I)	0% (i)	Immediate
17	Chlorinated or brominated Dioxins or Furans	P	All Products	0% (i)	Immediate
18	Chlorinated Naphthalenes	P	All Products	0% (i)	Immediate
19	Chromium(VI) (Cr+6; Hexavalent) and its compounds	P			
19.1	Chromium(VI) (Cr+6; Hexavalent) and its compounds	P	All Products except cement additives and leather articles	0.1% (m)	Immediate
19.2	Common water soluble chromium(VI) (Cr+6; Hexavalent) compounds	P	Cement additives	0.0002%(kkkk)	Immediate
21	Dichloro-diphenyl-trichloro-ethane (DDT)	P	All Products	0% (i)	Immediate
22	Dodecachloropentacyclo1,3,4-Metheno-1H cyclobuta(cd) pentalene, 1,1a,2,2,3,3a,4,5,5,5a,5b,6-dodecachlorooctahydro- decane (Mirex)	P	All Products	0% (i)	Immediate
23	Fluorinated Gases (Select CAS) (ww)	P			
23.1	Fluorinated Gases (Select CAS) (ww)	P	All applications in the United States other than the following uses: 1. As a refrigerant in new vehicle air conditioning systems in new vehicles 2. Recharging of vehicle air conditioning systems by the OEM (where the substance was originally incorporated into the vehicle system) 3. Consumer products used to recharge the vehicle air conditioning systems where the substance was originally used to charge the system by the OEM	0% (i)	Immediate
23.2	Fluorinated Gases (Select CAS) (ww)	P	Propellants	0% (i)	Immediate
23.3	Fluorinated Greenhouse Gases with Global Warming Potential (GWP) >150	P	Vehicle refrigerants or refrigerant blends in all M1 or N1 Class I vehicles produced for Europe; Tires in EU	0% (i)	Immediate

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23.4	Hydrofluorocarbons with Global Warming Potential (GWP) >150	P	Technical aerosols and foams in EU (y)	0% (i)	Immediate for technical aerosols; 1-Jan-2020 for extruded polystyrene foams; & 1-Jan-2023 for other foams
23.6	Perfluorocarbons and HFC-23 (Select CAS) (ww)	P	Fire protection systems and fire extinguishers in Europe	0% (i)	Immediate
23.7	Fluorinated Gases with a Global Warming Potential of ≥2500	P	Stationary refrigeration equipment (future prohibition - see effective date) (r) - except servicing existing equipment where legally permitted	0% (i)	1-Jan-2020
23.8	Fluorinated Gases (Select CAS) (ww)	P	All Products except heat transfer fluids	0% (i)	Immediate
24	Formaldehyde (Free)	P			
24.1	Formaldehyde (Free)	P	Any preservative or biocidal applications except for use as a disinfectant and algacide not intended for direct application to humans (Product type 2) in the EU	0% (i)	Immediate
24.2	Formaldehyde (Free)	P	Manufacture, import, sales, storage, transport and use for textiles and softener for leather processing	1.0%	Immediate
25	Glycols (Select CAS) (ww)	P			
25.1	2-Methoxyethanol (2ME) (ww)	P	All Products (i) except semiconductors	0% (i)	Immediate
25.3	2-(2-methoxyethoxy)ethanol (DEGME)(ww)	P	Paints, paint strippers, cleaning agents, self-shining emulsions, floor sealants for supply to the general public	0.1%	Immediate
25.4	2-(2-methoxyethoxy)ethanol (DEGME)(ww)	P	Consumer Products	0% (i)	Immediate
26	Hexachloro-1,3-butadiene	P	All Products	0% (i)	Immediate
27	Lead and its compounds	P			

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27.1	Lead and its compounds (Select CAS) (ww)	P	Paints and products intended for use in paint	0% (i)	Immediate
27.2	Lead and its compounds	P	All products except those specified in CURRENT ELV Annex II [EU-D 2000/53] or RoHS Recast Annex III EU-D 2011/65). Once the ELV Annex II exemption expiration date passes the prohibition is effective immediately regardless of vehicle/type approval date. (ppp, d)	0.1%	Immediate
28	Mercury and its compounds	P	All Products: Some exemptions may exist for facility research applications.	0% (i)	Immediate
29	Methanol	P			
29.1	Methanol	P	Car care products and windshield washer fluid for use in Russia	3.0%	Immediate
29.2	Methanol	P	Windshield washing fluid for use in South Korea	0.6%	Immediate
29.3	Methanol	P	Windshield washing or defrosting fluid supplied to the general public in the European Union (subject to future prohibition - see effective date)	0.6%	9-May-2019 (Customs Clearance)
30	Methylcyclopentadienyl manganese tricarbonyl (MMT)	P	Fuel in EU	0.0002% Mn/L	Immediate
32	N-Nitrosamines/N-Nitrosamides and Nitrosating agents	P			
32.1	N-Nitrosamines/N-Nitrosamides	P	Corrosion inhibitors, anticorrosion greases, waxes and other agents, metal working fluids, and water-miscible or water-mixed cooling lubricants, containing mixtures of nitrites and amines/amides that may form N-Nitrosamines/Nitrosamides	Substance Specific (see substances (ww) to determine threshold): 0.0005%, 0.0001%, 0.1% , or 0% (i)	Immediate
32.2	N-Nitrosodimethylamine, which has the molecular formula C <sub>2</sub> H <sub>6</sub> N <sub>2</sub> O	P	All Products	0% (i)	Immediate
32.3	Nitrosating Agents (j)	P	Corrosion inhibitors, anticorrosion greases, waxes and other agents, metal working fluids, and water-miscible or water-mixed cooling lubricants), containing mixtures of nitrites and amines/amides that may form N-Nitrosamines/Nitrosamides	0% (i)	Immediate
33	Nonylphenols	P	Detergent (surfactants) and cleaners, metal working products, coformulants of pesticides and biocides, Cooling Tower Chemicals and WWTP (b) chemicals, and any products added to waters that enter surface waters, cooling towers, and/or WWTP	0.1%	Immediate



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			Based on effective date:		
34	Nonylphenol Ethoxylates	P	1. Detergent (surfactants) and cleaners, metal working products, coformulants of pesticides and biocides, Cooling Tower Chemicals and WWTP (b) chemicals, and any products added to waters that enter surface waters, cooling towers, and/or WWTP  2. All Products (subject to future prohibition - See effective date)	0.1%	1. Immediate  2. July 2021 (All Products Prohibition)
35	Organo-Tin compounds	P			
35.1	Diorgano-Tin compounds (e.g. dialkyl-tin compounds)	P			
35.11	Dibutyltin (DBT)	P	All Products for supply to general public	0.1% (hhh)	Immediate
35.12	Dibutyltin (DBT)	P	All non-dimensional products where the substance is acting as a biocide in free association paint or when used to treat industrial waters	0% (i)	Immediate
35.14	Diocetyl tin (DOT)	P	All non-dimensional products where the substance is acting as a biocide in free association paint or when used to treat industrial waters	0% (i)	Immediate
35.2	Triorgano-Tin compounds	P			
35.21	Tributyltin compounds	P	All products	0% (i)	Immediate
35.23	Other triorganotin compounds (not tributyl tins)	P	All non-dimensional products where the substance is acting as a biocide in free association paint or when used to treat industrial waters	0% (i)	Immediate
35.3	Other organotin compounds (not dibutyl-, dioctyl- or triorganotins)	P	All non-dimensional products where the substance is acting as a biocide in free association paint or when used to treat industrial waters	0% (i)	Immediate
36	Ozone Depleting Substance (see definition in Appendix 1 of RSMS)	P			
36.1	Ozone Depleting Substances (Class I), Montreal Protocol: Annex A: All, Annex B: All, Annex C: Groups II and III & Annex E)	P		0% (i)	Immediate
36.11	Ozone Depleting Substances (Class I), Montreal Protocol: Annex A: All, Annex B: All, Annex C: Groups II and III & Annex E)	P	All Products	0% (i)	Immediate
36.12	Ozone Depleting Substances (Class I), Montreal Protocol: Annex A: All, Annex B: All, Annex C: Groups II and III & Annex E) Select CAS (ww)	P	All Products - except those used to service existing equipment where legally permitted	0% (i)	Immediate
36.2	Ozone Depleting Substances (Class II): Montreal Protocol Annex C Group I (HCFCs)	P	All Products - except those used to service existing equipment where legally permitted	0% (i)	Immediate

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37	Perfluoroalkyl compounds (Includes: Perfluoroalkyl sulfonates e.g., PFAS, fluorotelomers, and telomere-based polymeric substances)	P			
37.1	Perfluoroalkyl sulfonates (PFAS) (Select CAS) (ww)	P	Carpets and non-dimensional Products	0% (i)	Immediate
37.2	Perfluoro-octanoic acids (PFOA), its salts, precursors and higher homologues (uuu)	P	Based on effective date: 1. All non-dimensional products 2. All products (subject to future prohibition, see effective date)	0% (i)	1. Immediate 2. 4 July 2020
37.3	Perfluorooctane sulfonic acid (PFOS) and its derivatives C8F17SO2X (X = OH, Metal salt (O-M+), halide, amide, and other derivatives including polymers)	P	All Products	0% (i)	Immediate
37.4	Long-chain (C8-C21) PFCAs, their salts, and their precursors (vvv)	P	All non-dimensional products (i)	0% (i)	Immediate
38	Pentachlorophenol (PCP) its salts and esters	P	All Products	0% (i)	Immediate
39	Phthalates	P			
39.1	Phthalates (Select CAS) (ww)	P	All Products (o)	0% (i)	Immediate
39.2	Phthalates (Select CAS) (ww)	P	All Products	0.1%	Immediate
39.3	Phthalates (Select CAS) (ww)	P	All Products (subject to future REACH Authorisation, see effective date)	0.1%	4-Jan-2019
40	Polybrominated diphenyl ethers (PBDE)	P	All Products	0% (i)	Immediate
41	Polychlorinated biphenyls (PCB)	P	All Products	0% (i)	Immediate
42	Polychlorinated terphenyls (PCT)	P	All Products	0% (i)	Immediate
43	Polycyclic aromatic hydrocarbons (PAH; PCAH)	P			
43.1	Polycyclic aromatic hydrocarbons (PAH; PCAH) (Select CAS) (ww)	P	Petroleum mineral oil base stocks in lubricants (e)	3% Extractables by IP346 (total PAH content per basestock)	Immediate
43.2	Polycyclic aromatic hydrocarbons (PAH; PCAH)	P	Petroleum mineral oil base stocks in lubricants	0.1%	Immediate
43.3	Polycyclic aromatic hydrocarbons (PAH; PCAH) (Select CAS) (ww)	P	Extender oils including those used for the production of tires or parts of tires (gg)	0.0001% BaP and 0.001% total listed PAHs	Immediate
44	Products of Endangered Species	P	All Products	0% (i)	Immediate

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45	Radioactive isotopes and substances, all members	P	All Products, including scrap metal contaminants. Excludes substances and devices used in the manufacturing process	(j)	
46	REACH Authorization List (Annex XIV) Substances (Select CAS) (ww)	P			
46.1	REACH Authorized Substances (Select CAS) (ww)	P	All Products	0.1%	Immediate
46.2	Upcoming REACH Authorizations (Select CAS) (ww)	P	All Products (subject to future REACH authorisation, see effective date)	0.1%	Varies
47	REACH Restriction List (Annex XVII) Substances (Select CAS) (ww)	P			
47.1	2-(2-Butoxyethoxy)ethanol (DEGBE)	P	Spray paints or spray cleaners in aerosol dispensers for supply to the general public	3.0%	Immediate
47.3	Acrylamide	P	Grouting applications	0.1%	Immediate
47.4	Cyclohexane	P	Neoprene-based contact adhesives in packages for supply to the general public	0% (i)	Immediate
47.5	Monomethyl tetrachlorodiphenyl methane (Ugilec 141)	P	All Products	0% (i)	Immediate
47.6	Monomethyl-dibromo-diphenyl methane bromobenzylbromotoluene, mixture of isomers (DBBT)	P	All Products	0% (i)	Immediate
47.7	Methylenediphenyl diisocyanate (MDI) (Select CAS) (ww)	P	All non-dimensional products for supply to the general public with the exception of providing protection gloves and labeling acc to entry 56 / exception of hot melt adhesives	0% (i)	Immediate
48	Selenium and selenium-containing substances	P	Waste Streams (Slag, Industrial Wastes, etc.)	0.1%	Immediate
49	Silica, Crystalline - Quartz	P	Materials used in abrasive blasting	1.0%	Immediate
50	Sulfur Hexafluoride	P	All Products except for high-voltage electrical equipment and electrical switchgear	0% (i)	Immediate
51	Toluene	P	Adhesives/spray paints intended for sale to general public	0.1%	Immediate
52	Tris-(1-aziridinyl) phosphine oxide	P			
52.1	Tris-(1-aziridinyl) phosphine oxide	P	All Products	0.1%	Immediate
53	Vinyl chloride	P			
53.2	Vinyl chloride	P	Aerosols	0% (i)	Immediate
54	Declarable Substances	D	All Products	(v)	Immediate

## 2018 RSMS Footnotes:

a) Content Deleted

b) Waste Water Treatment Plant

c) Benzidine and Benzidine Dihydrochloride are prohibited at any concentration if intentionally added at any concentration for the Canadian market. Benzidine or its salts are prohibited above 0.01% for all other markets.

Note: "Intentionally added" means all substances directly added to the formulation.

d) Suppliers must self-certify compliance using a testing certification agency as specified in the California Implementing Regulation CCR Title 22, Chapter 30 Secs 66387.1-66387.9 available at <http://www.dtsc.ca.gov/SCP/upload/Final-Regulation-Language.pdf> and the Washington State Brake Friction Law Chapter 70.285 RCW; Implementing Rule Chapter 173-901 WAC available at <https://fortress.wa.gov/ecy/publications/documents/1204027.pdf> (see WAC 173-901-060).

e) The listed Petroleum mineral oil base stocks in lubricants are prohibited for supply to the general public if total extractable polyaromatic hydrocarbon content is  $\geq 3\%$  as measured by Institute of Petroleum standard IP346 (a.k.a. EI346). Included substances are given a threshold of 0% to allow Ford a means to identify affected products and determine total PAH level.

f) See <http://www.chemicalsubstanceschimiques.gc.ca/plan/approach-proche/index-eng.php> for CAS #s requiring declaration at any concentration in both IMDS for dimensional materials (hard-parts) and COVISINT – GMAP-e1291 for non-dimensional materials (chemicals) to allow Ford to meet applicable reporting requirements. Declaration is required for all listed substances.

g) Declaration required at any concentration above detection limits where testing has been performed. No additional testing required, however reasonable and expected declaration from sub-suppliers to main suppliers is expected where supplier has knowledge of its remaining presence in their final product.

h) Consistent with the Canadian Chemical Challenge regulations, Ford requires declaration at any concentration to all substances listed in footnote-f above in both IMDS (hard-parts) and COVISINT (non-dimensional chemicals) where it is reasonable to expect that the supplier has knowledge of its remaining presence in their final product (no testing is required). NOTE: GADSL lists only a subset of the Canadian Chemical Challenge substances that are suspected to be found in automotive hard-parts. See the GADSL list at <http://www.gadsl.org/> for subset listing. Ford requirements for establishing compliance are greater than those of GADSL and require declaration for all Canadian Chemical Challenge substances at any concentration intentionally added or otherwise. Hard-part suppliers must review the entire Canadian Chemical Challenge list found in footnote (f), and if any substance is known to remain on the hard-part after manufacture, must declare the substance in IMDS. The GADSL list and thresholds with regard to the Canadian Chemical Challenge substances should be considered as a sub-set of the full requirement, and only be used as a reference, when reporting for purposes of sale to Ford.

i) If intentionally added at any concentration.

"Intentionally added" means all substances directly added to the formulation.

"Incidental presence" means a residual, a trace contaminant or impurity that was not intentionally added to the formulation.

j) See regulations TRGS 611: Restrictions on the use of water-miscible or water-mixed cooling lubricants whose use can result in the formation of N-nitrosamines (<http://www.baua.de/de/Themen-von-A-Z/Gefahrstoffe/TRGS/TRGS-615.html>) and TRGS 615: Restrictions on the use of anticorrosion agents whose use can lead to the formation of N-nitrosamines for classes of nitrosating agents (<http://www.baua.de/en/Topics-from-A-to-Z/Hazardous-Substances/TRGS/TRGS-611.html>).

## 2018 RSMS Footnotes:

k) Short chain chlorinated alkanes (SCCA) are defined using the most restrictive of global regulatory requirements, and are defined by the following broad equation:  $C_nH_xCl_{(2n+2-x)}$  where  $n = 10$  to  $13$ .  $x$  is not bounded. This includes all alkanes ( $n$ -, -iso, aromatic).

--Mid-chain chlorinated alkanes (MCCA) are defined as having carbon chain length C14 to C17.

--Long-chain chlorinated alkanes (LCCA) are defined as alkanes/alkenes having carbon chain length C18-C20.

--Very Long-chain chlorinated alkanes (vLCCA) are defined as alkanes/alkenes having carbon chain length greater than C20.

Non-dimensional products containing medium, long, very long, or unspecified chain chloro-alkanes require documentation that their presence does not cause exceedance of the SCCA threshold of 0.0% by weight. To have these products accepted, you must provide a letter to Ford affirming that these substances do not contain SCCAs.

l) See SR 814.81 Chemical Risk Reduction Ordinance (<https://www.admin.ch/opc/en/classified-compilation/20021520/index.html>) for products defined as cleaning products in the regulation.

m) A maximum value of 0.1% by weight, of Hexavalent Chromium, per homogenous material will be tolerated, (this percentage is based on the weight of the coating containing the Hexavalent Chromium, not the part weight).

n) Exceedance to threshold limits for select products requires permits, see:[http://www.ec.gc.ca/toxiques-toxics/7A9E5803-0737-408A-97D9-5C7997127128/2be\\_Permit\\_Ap\\_Frm\\_e.pdf](http://www.ec.gc.ca/toxiques-toxics/7A9E5803-0737-408A-97D9-5C7997127128/2be_Permit_Ap_Frm_e.pdf) Manufacture, sale or import of products containing 2-butoxyethanol above thresholds listed in Schedule I is prohibited unless: 1) the product is diluted before use so that the 2-butoxyethanol levels are below the thresholds set in Schedule 1; OR 2) a permit has been issued. See <http://laws-lois.justice.gc.ca/eng/regulations/SOR-2006-347/page-1.html>

o) All uses other than use as a chemical standard for analytical experiments.

p) Excludes applications exempted in REACH Annex XVII, Item 19 (Arsenic compounds), numbers 4-7.

q) Painted articles shall not be placed on the market if the concentration of cadmium (expressed as Cd metal) is equal to or greater than 0.1 % by weight of the paint on the painted article.

r) The prohibition is not applicable to equipment intended to cool products to temperatures below  $-50\text{ }^{\circ}\text{C}$

s) This substance is subject to a pending REACH Authorisation. The prohibition is active after the Effective Date specified

t) Nickel Substances are not prohibited per se, but are subject to a Nickel release rate threshold of  $0.5\text{ }\mu\text{g}/\text{cm}^2/\text{week}$  as noted in the subsection header. Individual substances are listed with a threshold of 0% to help Ford identify affected products.

u) If intentionally added at 0.003% for interior vehicle use, or 0.006% for exterior vehicle use

v) All listed substances must be declared at the detection limit for the substance based on standardized testing methodologies.

w) Content deleted

x) Content deleted

## 2018 RSMS Footnotes:

y) Except when required to meet national safety standards

z) Content deleted

aa) The nickel release rate shall be determined by test method BS EN 1811:2011 +A1:2015. The method can be obtained at <http://shop.bsigroup.com/ProductDetail/?pid=000000000030316120>

bb) Content deleted.

cc) Content deleted

dd) Content deleted

ee) Content deleted

ff) Content deleted

gg) EN 16143:2013 should be used for demonstrating conformity with the limits per EU-R 2015/326. Each individual substance is given a threshold of 0% to help Ford identify affected products.

hh) Content deleted

ii) Content deleted

jj) All products, including scrap metal contaminants: Radioactivity should meet "Unconditional Use Clearance Level" requirements consistent with International Atomic Energy Agency (IAEA) and the Commission of European Communities (CEC) standards for individual radionuclides IAEA-TECDOC-855 (1996) & Safety Series RS-G-1.7 (2004). (See RSMS Section 3.1.11). Radioactive sources used in manufacturing processes: are exempted if they meet exemption levels. Exempted sources typically include small sources of radiation such as tracers used in research, calibration sources and some consumer products containing small sources or low levels of activity per unit mass. The corresponding levels of activity or activity concentration are called exemption levels.

kk) Content deleted

ll) Content deleted

mm) Content deleted

nn) Substances listed at <http://www.ec.gc.ca/ese-ees/default.asp?lang=En&n=72FC165E-1>.

oo) Substances declarable globally at any concentration listed at: <http://www.chemicalsubstanceschimiques.gc.ca/group/boron-bore-eng.php#tbl1>

pp) Substances declarable globally at any concentration listed at: <http://www.chemicalsubstanceschimiques.gc.ca/group/internat-eng.php>

## 2018 RSMS Footnotes:

qq) All Cobalt and its compounds subject to the Canadian Challenge listed at: <http://www.chemicalsubstanceschimiques.gc.ca/group/cobalt-eng.php#tbl1>

rr) Substances declarable globally at any concentration listed at: <http://www.chemicalsubstanceschimiques.gc.ca/group/phenyl/index-eng.php>

ss) Substances declarable globally at any concentration listed at: <http://www.chemicalsubstanceschimiques.gc.ca/group/diisocyanate-eng.php>

tt) Substances declarable globally at any concentration listed at: [http://www.chemicalsubstanceschimiques.gc.ca/group/flame\\_retardant-ignifuges-eng.php](http://www.chemicalsubstanceschimiques.gc.ca/group/flame_retardant-ignifuges-eng.php)

uu) Content deleted

vv) All Selenium and selenium-containing substances must be declared globally at any concentration in addition to the ones subject to the Canadian Challenge listed at: <http://www.chemicalsubstanceschimiques.gc.ca/group/selenium-eng.php#tbl1>

ww) Please contact [kkelle17@ford.com](mailto:kkelle17@ford.com) to request the full Ford Restricted Substances List (RSL).

xx) Content deleted

yy) Declarable substance categories with no listed legal driver are used to capture chemicals that are of the same chemical family as those currently regulated, but that may be subject to future regulation, have pending regulation, or are members of other categories but defined by the listed chemical category.

zz) Content deleted

aaa) The regulatory drivers specified in the Legal requirements / regulations column for each section/subsection reflect the rationale for the inclusion of the section in the RSL. Individual substances within each section/subsection are either directly referenced by the specified regulations or reflect Ford's interpretation of those regulations.

bbb) Content deleted

ccc) Regulatory ref: Significant New Activity (SNAc) Notices and associated New Substance Notification Requirements (NSNR).

Applicability: All\* non-dimensional materials, and any dimensional materials (articles/parts) that can disperse matter during use, import, or processing (including manufacturing), that are: 1) destined for use in Canada, or 2) whose destination is unspecified or unknown at time of chemical disclosure, or 3) that are determined by Ford to be uncontrolled are included in the prohibition in affected applications in North America.

\*Clarification: Non-dimensional fluids or particulate matter that remain contained within a manufactured item during normal use, or whose normal release of fluid or particulate matter is controlled and non-dispersive and is specific to the end use of the item (e.g., lubricants in motor vehicles are released within the engine but remains within the vehicle until replaced), are not included in the prohibition. In contrast, for example, substances in brake pads which are considered dispersive during use would be included in the prohibition if listed as an affected application.

ddd) A partial list of Country specific global regulations to implement the Rotterdam Convention covering PCB's can be found at the following link (where a particular country is not listed, suppliers of materials must refer to the Country's Federal Environmental Regulations directly). Note that this link provides the original implementation regulations only; please check the individual consolidated regulation listed for each country for any amendments and updates.

[http://archive.pic.int/CH/Demo/embed/viewB\\_chemAnnexIII.php?chem=3982&show=importresponses&viewdetails=1](http://archive.pic.int/CH/Demo/embed/viewB_chemAnnexIII.php?chem=3982&show=importresponses&viewdetails=1).

## 2018 RSMS Footnotes:

eee) Applies to Parts or articles with predictable direct and prolonged or short-term repetitive contact with the human skin or the oral cavity under normal or reasonably foreseeable conditions of use-to meet the threshold listed in REACH Annex XVII and ZEK01.4-08 Table 1 Cat 2

fff) Protection tools are recommended for operators who may have long-term skin contact, during the manufacturing process, with products potentially containing PAHs.

ggg) PAHs should not be used for deadener pads in APA above threshold noted. Any usage must be approved by APA Materials Engineering.

hhh) EU REACH Amendment 276/2010 Annex XVII specifies that content at or above 0.1% by weight of tin is prohibited. The calculation of the tin content in the substance is done using the molecular weight of both tin and the substance. IMDS provided guidance for performing the calculation can be found at: [https://public.mdssystem.com/documents/10906/17094/faq\\_organo\\_tin\\_compounds.pdf](https://public.mdssystem.com/documents/10906/17094/faq_organo_tin_compounds.pdf)

iii) The following articles and mixtures:

- 1) One-component and two-component room temperature vulcanization sealants (RTV-1 and RTV-2 sealants) and adhesives in EU for sale to general public
- 2) paints and coatings containing DBT compounds as stabilizers when intended for outdoor applications,
- 3) soft polyvinyl chloride (PVC) profiles whether by themselves or coextruded with hard PVC
- 4) fabrics coated with PVC containing DBT compounds as stabilizers when intended for outdoor applications
- 5) outdoor rainwater pipes, gutters and fittings, as well as covering material for roofing and facades."

jjj) Content deleted

kkk) Requirements apply only to intended use as a biocide in a treated article or biocidal product, as defined by the Biocidal Products Regulation (BPR) EU-R 528/2012 and its amendments. The authorization and/or prohibition is dependent upon the substance, the end use (product type) and a supplier authorization. Substance/product type approval status can be found at: <http://echa.europa.eu/information-on-chemicals/biocidal-active-substances>. It is the responsibility of the supplier to evaluate any product containing a biocidal substance to confirm that the substance has been approved for the application. The supplier must also be an authorized supplier of the substance in the EU.

lll) Content deleted.

mmm) Content deleted

nnn) Content deleted

ooo) Content Deleted

ppp) Applies to components which are in the scope of the RoHS Directive. Does not apply to electrical or electronic devices specifically designed to be used in vehicles.

qqq) Cadmium and its compounds are prohibited as noted below except in cases where it is used for safety purposes in vehicle and non-vehicle applications in the EU.



## 2018 RSMS Footnotes:

rrr) Content deleted.

sss) Content deleted.

ttt) The CAS numbers listed include tin, tantalum, and tungsten derivatives listed in the IMDS Conflict Minerals group.

uuu) Includes all substance meeting the following definitions specified in PCTSR Schedule 2.1

- Perfluorooctanoic acid, which has the molecular formula  $C_7F_{15}CO_2H$ , and its salts; and
- Compounds that consist of a perfluorinated alkyl group that has the molecular formula  $C_nF_{2n+1}$  in which  $n = 7$  or  $8$  and that is directly bonded to any chemical moiety other than a fluorine, chlorine or bromine atom.

vvv) Includes all perfluorocarboxylic acids that have the molecular formula  $C_nF_{2n+1}CO_2H$  in which  $8 \leq n \leq 20$  and their salts as specified in PCTSR Schedule 2.1.

www) France adopted a provisional measure of restricting these compounds through Commission Implementing Decision 2015/1131 (<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32015D1131&from=EN>). An amendment to REACH (Annex XVII) restricting ammonium salts in Insulation Mixtures and Cellulose Insulation Articles was issued in June 23, 2016 as Commission Regulation (EU) 2016/1017; with an implementation date of July 14, 2018. The amendment states however that if a member state has a national provisional measure in place (such as the French Implementation Decision), the restriction shall apply from that date. This restriction is in place UNLESS the emission of ammonia from those mixtures or articles results in a concentration of less than 3 ppm by volume ( $2.12 \text{ mg/m}^3$ ) in accordance with adaptations of Technical Specification CEN/TS 16516.

xxx) The following are the common industry standards for determining presence of asbestos fibers within materials: EPA 600/R-93/116 (as amended) is the industry standard in the US (and most countries with asbestos regulation) or NIOSH 9002. Appropriate quantitative analysis of asbestos by the EPA/NIOSH methods can include point counting, Transmission Electron Microscopy (TEM) or Scanning Electron Microscopy (SEM).

yyy) No Content

zzz) Content deleted

aaaa) Content deleted

bbbb) Manufacturing (including importing) or processing of any chemical substance listed in USEPA SNUR Table 2 and Table 3 shall not be considered as a significant new use for the following applications:

- (i) Use as an anti-erosion additive in fire-resistant phosphate ester aviation hydraulic fluids.
- (ii) Use as a component of a photoresist substance, including a photo acid generator or surfactant, or as a component of an anti-reflective coating, used in a photomicro lithography process to produce semiconductors or similar components of electronic or other miniaturized devices.
- (iii) Use in coating for surface tension, static discharge, and adhesion control for analog and digital imaging films, papers, and printing plates, or as a surfactant in mixtures used to process imaging films.
- (iv) Use as an intermediate only to produce other chemical substances to be used solely for the uses listed in paragraph (a)(3)(i), (ii), or (iii) of this section.

cccc) The listed PAHs are not prohibited if total extractable content is  $<0.02\%$ . Each individual substance is given a threshold of 0% to help Ford identify affected products.

## 2018 RSMS Footnotes:

dddd) Where no CAS number for a substance is available but US TSCA Pre-Manufacture Notice (PMN) or Canadian DSL Accession numbers are listed in the applicable regulations, these are listed in the RSL in place of CAS#s. Material suppliers are obligated to provide this number as Non-CAS content in the formulation disclosure, and also with the Good Chemical Name, if applicable to the product.

eeee) Content deleted

ffff) Diethylene glycol methyl ether is prohibited at 0% if it contains greater than 5% 2-methoxy ethanol.

gggg) Content Deleted

hhhh) Content Deleted

iiii) Ford Motor Company requires suppliers to declare ALL dimensional and non-dimensional substances if present at or above 0.1 % (weight percent). Substances required to be reported below 0.1 % will be specifically listed in the RSMS/RSL for enhanced disclosure.

jjjj) No Content

kkkk) The standard adopted by the European Committee for Standardization (CEN) for testing the water-soluble chromium (VI) content of cement and cement-containing mixtures shall be used as the test method for demonstrating conformity.

llll) Content deleted



## 2018 Restricted Substance Management Standard Reporting Requirements and Guidelines

### 1 Procedure - Production Materials

#### 1.1 IMDS Reporting Requirements

- **Reporting in IMDS:** Vehicle assembly material suppliers are required to report all hard parts (production and service), materials and substances remaining on a vehicle at point of sale via the International Material Data System (IMDS) <http://www.mdssystem.com/>, to Ford's databases [102] and / or [5117]. Deviating data submission is not allowed. **All Production parts must be reported under the submission for the Tier 1 assembly, using the Ford released part number by the GPDS <PEC> milestone which is approximately 8 months before Job 1.**
- **Reporting for Materials:** 100% materials, type and weight of all materials must be included.
- **Current production and service parts** should have already been reported in IMDS. If they are not, or if an update is required, they must be reported immediately.
- **Reporting timing:** Full IMDS reporting and full compliance with this Standard must be achieved at the GPDS <PEC> (Preliminary Engineering Completion) gateway or 8 months before vehicle <MP1>(Job 1), whichever comes first.
- Components for Powertrain programs, which follow Powertrain Unit GPDS program timing, must achieve full IMDS reporting and full compliance with this Standard at the Unit Tool Development gateway <Unit TD> or 8 months before Powertrain Job 1.
- **Reporting Concentration Ranges:** When reporting substance concentration ranges in IMDS, please be aware that the highest value in the range will be used to calculate concentration and threshold.
- **Service parts** not common with production parts and unique service parts must be reported between <PEC> 8 months and <LR> 5 months before Job 1.
- **Reporting part list:** All the parts / materials that need to be reported will be posted in the Ford Global Materials Management (GMM) Supplier Portal

These guidelines are applicable to supplies to Ford Motor Company (FMC) only. Ford will accept data sheets created following IMDS Recommendations as a minimum requirement.

##### 1.1.1 Specific Data Submission Requirements

Non-dimensional materials (fuels, lubricant fluids, pasty greases, rust preventives, paints, polymers, adhesives and sealants, etc.) contained in or added on dimensional hard parts are required to be reported to Ford's IMDS database partition FPTO (IMDS Company ID: 5117). Paints, polymers, adhesives and sealants, etc., delivered to Ford in the *uncured* state and cured during the automobile manufacturing process need to be reported in IMDS **IN THE FINAL (CURED) STATE**. The *Internal Mat.-No.* in IMDS should be populated with the Ford Material Specification number and the Ford Toxicology number (if available) for the material. Example: Suppliers of polyurethane should report their material in the final cured state as polyurethane and not in the initial uncured state of diisocyanate and polyole.

For all non-dimensional parts listed on the BOMs (treated as regular hard parts, for details see section 1.10), suppliers should send the semi-component/material datasheet to Ford's IMDS database partition FPTO (IMDS Company ID: 5117) and await the responsible Ford engineering activity's approval. Upon approval, the supplier must send the datasheet as a pseudo-component level with a weight of 1 g to Ford's IMDS partition FMC (IMDS Company ID: 102).

Suppliers of **sheet metal/coated sheet metal** semi-components/materials are only required to submit their semi-component/material datasheets to IMDS database partition FPTO (IMDS Company ID: 5117). The *Part/Item No.* field in IMDS should be populated with the Material Specification Number, **NOT the Ford Part Number**. Pseudo-component level reporting to IMDS partition FMC (IMDS Company ID: 102) is no longer required.



## 2018 Restricted Substance Management Standard Reporting Requirements and Guidelines

A datasheet describing parts or materials for current or future production must not be blocked in its Recipient data section so that Ford can further reference the datasheet. If forwarding was originally not allowed the supplier is asked to send a new datasheet version including the required amendment.

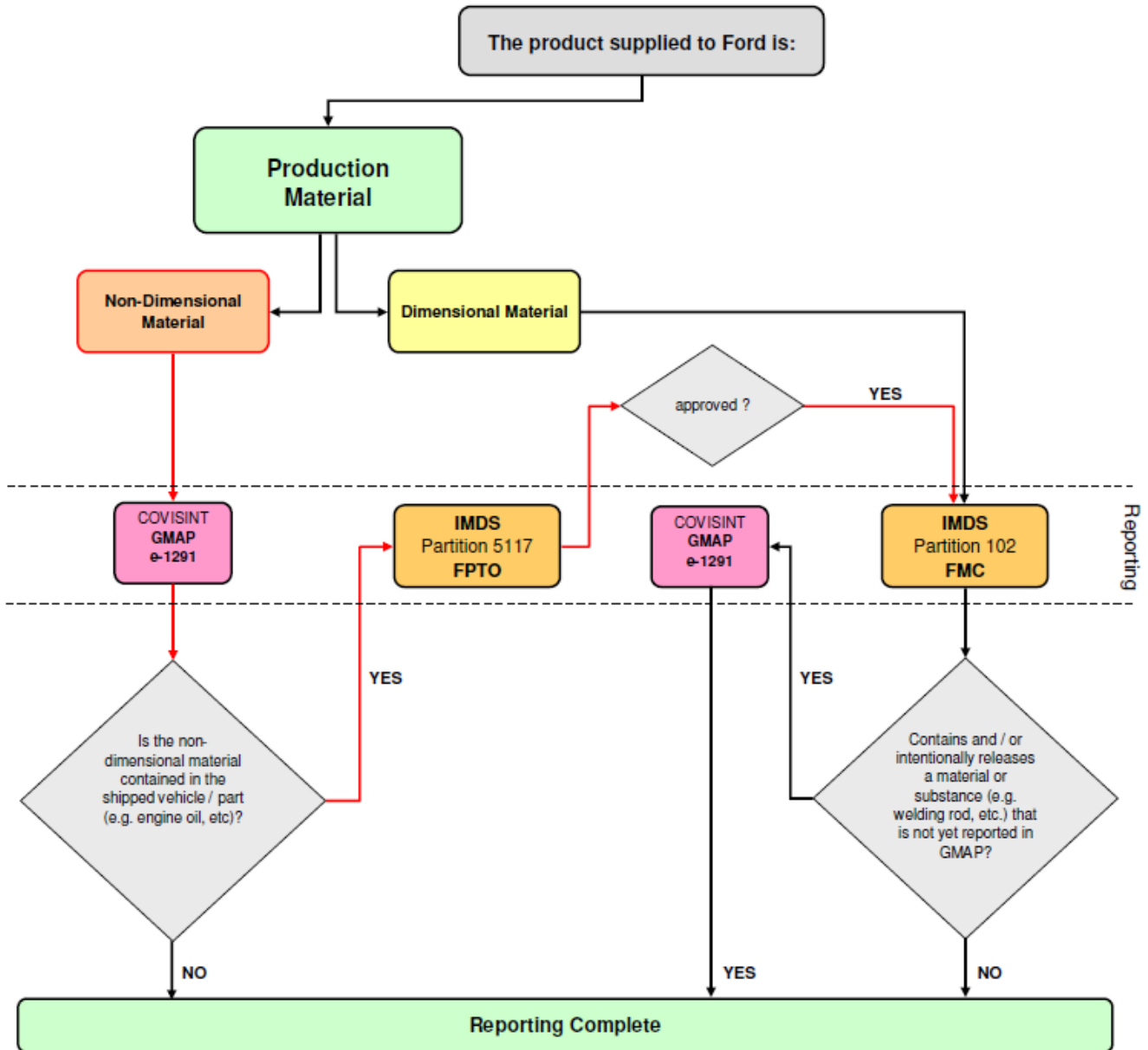







Fig. 1 **Production Material Reporting Pathways** (for material definition see section 3.3.1 in the Restricted Substance Management Standard main document)

### 1.2 Component / Material / Basic Substance Content Disclosure – and Hierarchical Structure

The necessary information required in IMDS needs to be presented in a hierarchical structure. This can easily be done by building tree structured Material Data Sheets, comprising of:



## 2018 Restricted Substance Management Standard Reporting Requirements and Guidelines

-  Component (Part or Assembly)
  -  Sub-component(s) (component parts)
    -  Semi-(finished) component(s)
      -  Material(s)
        -  Basic Substance(s) – Global Automotive Declarable Substance List (GADSL) and RSMS Table 1 substances are REQUIRED

**Every component** must have at least one material (or one component/sub-component with one material) associated with it. Total materials weight under the components (whether attached to a sub-component or not) has to be equal to the total component weight.

### 1.3 Sub-Component

This is a component added under the structure of a top-level component. The attributes are the same as for a component. When used, this must have at least one material associated with it. The total material weight under the sub-component has to be equal total sub-component weight.

### 1.4 Prescription for Production Materials (Assembly Components)

- Flat reporting is allowed only for electric / electronic components of different product families like assembled printed circuit boards (PCB), hybrids (standard, LTCC) and wire harnesses used in automotive applications. All sub-components in an assembly must appear as such, i.e. as elements in the IMDS datasheet's structure tree.
- The assembly component's **stated** mass on the top node of the component ("Measured Weight per item") must represent the **real** mass. Real masses are either derived from statistical product control cards or are determined by weighing a statistically relevant number of materials and calculating the statistical average (arithmetic mean).
- Component weight deviation ("Measured Weight" / "Calculated Weight", +/- %). The deviation values are checked at every component node level. The deviation between the measured component weight and the calculated weight must not exceed the following:

Weight of Component	Max. Deviation in %
< 1 g	+/- 100%
1 g - 99 g	+/- 10%
100 g - 999 g	+/- 5%
1.0 kg - 9.99 kg	+/- 2%
10 kg - 99.99 kg	+/- 1%
> 100 kg	+/- 0.5%

- Certify polymeric parts are appropriately marked according to the relevant legislation (see also Ford Engineering CAD & Drafting Standard E-4 in its latest version).

When setting up an IMDS datasheet describing a vehicle component and comprising of polymeric (plastic) or elastomeric (rubber) material the field **Parts Marking** becomes visible requiring data entry. Using this field you certify your company's products supplied to Ford are *physically* marked according to legal and to standard requirements. The original legal parts marking requirement is the EU ELV Directive (2000/53/EC), Article 8.



## 2018 Restricted Substance Management Standard Reporting Requirements and Guidelines

Please use the datasheet's pull down bar to select your applicable answer out of three available standard clauses. Your datasheet will be rejected if your answer was "No". Datasheets marked "Not Applicable" will be reviewed by Ford and accepted or rejected depending on IMDS rules (For details see section 1.12). If further clarification is necessary, use the Help function in IMDS.

- Report percentage of recycled content in polymeric materials.

### 1.5 Semi-(finished) Component

This is not the same thing as a sub-component within a part. The definition of a semi- (finished) component is an item with physical properties that will NOT be used in the final product without further improvement, i.e. leather that needs to be cut and sown into upholstery or the base for a cogwheel that needs further machining. There must always be at least one material associated to a semi- (finished) component.

### 1.6 Materials

- **Report 100% materials, type and weight of all materials.**
  - The sum of the material weight defines the total part/assembly weight.
  - Surface treatments, such as chromate passivation, should be entered as a separate material (attached to a semi-finished component).
  - The material classification field must be filled in. (Ford Motor Company uses this field to calculate recyclability). The use of the undefined classification must be avoided.

### 1.7 Substances (Forming or Being Incorporated in Materials)

All substances **being ingredients of the material** contained in the **Global Automotive Declarable Substance List** (GADSL), **along with any additional or modified requirements specified in Attachment 2 of this Standard**, MUST be disclosed in IMDS.

- All substances identified in the GADSL and/or the RSL, that accompanies the RSMS Attachment 2, must be identified with the correct CAS number when reported in IMDS (except some Fibers which are not reported by CAS number).
- If a supplier reports a GADSL and/or RSL substance, that accompanies the RSMS **Attachment 2**, without the correct CAS number, they will NOT be fulfilling the requirements of this Standard.
- The use of non-CAS identified substances is acceptable for the reporting of substances NOT covered in the GADSL and/or the RSL that accompanies the RSMS **Attachment 2**.
- Paints, polymers, adhesives and sealants etc. must be reported in the cured state.
- Substances listed in RSMS SUBSTANCE RESTRICTIONS - **Attachment 2** associated RSL and/or GADSL must be reported in IMDS. "Conflict Minerals" as defined in section 1.13 must also be reported in IMDS. Conflict Minerals must not be marked as "Confidential" nor can the substances be hidden by using a wild card ("joker") designation.

**If the substance you need to report is not available in IMDS, please use the IMDS's Basic Substance Request option.**

- Substances must be entered in the form as they exist in the material (i.e. elemental breakdown (C, H, N, O, etc.) for polymers is NOT acceptable).



## 2018 Restricted Substance Management Standard Reporting Requirements and Guidelines

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- Basic Substance disclosure requirements will increase in the future. Datasheets with outdated levels of information may need revisiting in the future. Thus, Ford recommends that suppliers report their parts following IMDS minimum requirement recommendations published in the IMDS Recommendation page.
- If necessary, proprietary (i.e. trade secret) material composition information can be kept secret by hiding substances from reporting. Use the **Confidential** check box after having selected the substance to be hidden. Up to 5 % of the contained substances can be hidden by either blinding out the confidential information or by using wild cards like "Misc.". Substances listed in Attachment 2 and GADSL cannot be hidden. Conflict Minerals must not be marked as "Confidential" nor can the substances be hidden by using a wild card ("joker") designation.
- For any substances on the GADSL, the supplier must know the reason the substance is used. When sending the MDS to Ford, IMDS will require the selection of an APPLICATION ID for each substance on the GADSL.

### 1.8 Reporting IMDS Datasheets

- **Publishing Material Data Sheet (MDS)**  
This function is used to publish a MDS in the IMDS online system. **NOTE: Ford does not use published MDS.** Tier 1 suppliers must send MDS directly to Ford Motor Company.
- **Proposing MDSs**  
All datasheets sent to Ford account 102 must be sent using the "Propose" function and not the "send" function.
- **An update of existing IMDS data is required if there is:**
  - Change in Part Number. For FMC this means prefix, base, and first digit of suffix, e.g., -AB to -BC. If second and beyond digits of the suffix are changed with no other changes mentioned below, no need to resubmit.
  - New material
  - > 10% or > 50 grams change in material mass
  - > 10% or > 50 grams change in end item part mass
  - New GADSL listed substance or RSMS Attachment 2 substance added to a material
  - > 10% change in mass of an already reported GADSL substance or RSMS Attachment 2 substance, or if a change in mass causes a threshold requirement to be crossed
  - Any change in mass (increase or decrease) of ELV metals (Lead, Mercury, Cadmium and Hexavalent Chromium), exempt and non-exempt applications
  - Changes in Polymeric parts marking

Suppliers of production/service parts that fall into the above categories must certify compliance to this Standard using the Ford certification page in IMDS.

### 1.9 Non-dimensional and Hazardous Articles Production Material Reporting

All non-dimensional production material suppliers must certify compliance to RSMS in GMAP-e1291 no later than December 31, 2016 following on-line instruction.

(<https://fim.covisint.com/ap/ford?TARGET=https://web.emmg.ford.com/e1291/menu/>)

See Section 3 for additional data reporting requirements.

### 1.10 China CAMDS Reporting and Data Transfer Requirements

ELECTRONIC REPORTING USING THE CHINA AUTOMOTIVE MATERIAL DATA SYSTEM  
([HTTP://WWW.CAMDS.ORG/](http://www.camds.org/))

[TOP](#)



## 2018 Restricted Substance Management Standard Reporting Requirements and Guidelines

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ALL PARTS AND MATERIALS REMAINING ON CHINA LOCALLY PRODUCED VEHICLES AT POINT OF SALE AND ALL SERVICE PARTS ARE REQUIRED TO BE REPORTED USING CAMDS

- **Reporting in CAMDS:** Vehicle assembly material suppliers for China locally produced vehicles are required to report all hard parts (production and service), materials and substances remaining on a vehicles at point of sale via the CHINA AUTOMOTIVE MATERIAL DATA SYSTEM (CAMDS) <http://www.camds.org/>, to CHANGAN FORD's database [CA\_3\_24132] or JIANGLING MOTOR COMPANY's database [CA\_3\_31184] dependent on which plant the vehicle is built in China. Deviating data submission is not allowed. **All Production parts** must be reported under the submission for the Tier 1 assembly, using the Ford released part number.
- **IMDS data transfer into CAMDS:** For parts which a supplier has already reported in IMDS, the supplier is still required to report in CAMDS if requested by China Homologation. Ford will arrange the data transfer activity for reported IMDS data into CAMDS based on China homologation request. If a supplier does not want Ford to transfer the data, please send an email to Janet Yin ([WYIN4@FORD.COM](mailto:WYIN4@FORD.COM)) and in this case the supplier needs to finish CAMDS reporting for parts supplied to China before Jun 30<sup>th</sup>, 2018.
- **Other Reporting Requirements** (Reporting for Materials, Reporting Timing, Reporting Concentration Ranges and Services Parts Reporting) will follow the same requirement of IMDS Reporting Requirements.

If you have any question regarding CAMDS reporting and data transfer requirement, please contact Janet Yin ([WYIN4@ford.com](mailto:WYIN4@ford.com))

### 1.11 Other Requirements

**All Ford Motor Company dimensional materials (hard parts) and non-dimensional materials (treated as hard parts) Tier 1 suppliers must use Ford's *Global Material Management system (GMM)* as follows:**

Suppliers access the GMM Supplier Portal:

<https://fim.covisint.com/ap/ford?TARGET=https://fsp.covisint.com> to check all the parts that need to be reported in IMDS and report the exact part numbers from the Portal into IMDS. This will help to match BOMs and eliminate non-value added work, and will resolve some consignment parts and colored parts issues. If you have any dispute for the parts listed in your Portal, please contact the Ford RSMS Helpdesk For Service parts, suppliers need to access:

<https://fim.covisint.com/ap/ford?TARGET=https://web.purinfo.ford.com/>

**For the parts that are not in the GMM Supplier Portal list, suppliers do not need to report in IMDS unless they are required specifically by Program or Purchasing STA for PPAP purpose. Suppliers' annual RSMS certifications will ensure that these unreported parts comply with RSMS. The RSMS certification can be done in IMDS either at Parent level (for all the parts from your whole company) or at the site level (for the parts supplied by your site only).**

- When a data sheet is proposed to Ford Motor Company in IMDS you will need to select the appropriate brand as the recipient i.e. – Ford (including Lincoln). Suppliers can use their 4-digit GSDB parent code to report for the whole company or use their 5-digit GSDB site code for their site level reporting when submitting data. If suppliers are unaware of their GSDB code, they should contact their finance **person**. However, suppliers reporting for site level information will also require their 4-digit GSDB parent code for validation purposes.
- For assemblies with components as service parts, suppliers should report the components (service parts) first into IMDS with their engineering part numbers; subsequently, suppliers can re-





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port the end-item assembly with its engineering part number, and reference the subcomponents (service parts) that they have already reported into IMDS.

- Input the Ford Motor Company Material Specification Numbers (if you use Ford specifications) and Toxicology numbers (for any non-dimensional chemicals included in your hard parts, e.g., fluids, greases, etc., that have been cleared by the Ford Toxicology Office and Environmental Quality Office) in the IMDS reporting screens. If you are using industrial standards or your own standards, input the standard's information in the IMDS reporting screens.
- For bailment/consignment parts, the bailor suppliers are responsible to submit IMDS data to the bailment supplier (bailee). If the bailor has Ford end item part numbers they are required to send the IMDS to **both** the bailment supplier and Ford Motor Company using the “propose” function in IMDS.
- For a tier 1 assembly part that has Ford direct buy components supplied by other suppliers, the tier 1 supplier need to facilitate to have the components reported to tier 1 supplier and to Ford if the components have Ford end-item part numbers.

### 1.12 Internal Communication Requirements within Tier 1 Supplier Company

Please cascade this document package to the department heads pertinent to your organization. Departments may include but are not limited to:

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• Product Development</li> <li>• Health, Safety and Toxicology</li> <li>• Manufacturing</li> <li>• Information Technology</li> <li>• Purchasing</li> </ul> | <ul style="list-style-type: none"> <li>• Quality Manager</li> <li>• Materials Engineering</li> <li>• Sales</li> <li>• Environmental/ Regulation</li> <li>• Ford Account Manager/Business Unit</li> </ul> |
|---|--|

Both Corporate level and manufacturing site level reporting and certification are allowed. By certifying, the supplier is taking the responsibility that their parts / materials comply with the latest issue of the RSMS.

### 1.13 Guidelines Concerning the IMDS Datasheet – Summary Table

Field	Requirement	Comment
Chapter 1 <b>Description</b>	<ul style="list-style-type: none"> <li>• Part names</li> </ul>	
Chapter 2 <b>Material Name</b>	<ul style="list-style-type: none"> <li>• Polymer material to ISO 1043</li> <li>• Should be descriptive and not generic, e.g. “Spring Steel Wire A DIN 17223” not “Steel”</li> </ul>	
Chapter 3 <b>Trade Name</b>	Insert Trade Name here	When applicable
Material No.	The number that specifically identifies the material within the Norm. (e.g. 301S26 a grade of Stainless Steel defined in BS 2056, 1.5510 a grade of Steel defined in DIN 1654-4).	
Symbol	Following ISO 1043/ISO 1629 requirements to enter the appropriate symbols	Must be inserted for polymeric parts
Chapter 4 <b>Classification</b>	e.g. steels / thermoplastics	Must be filled in
Norms / Standards	Industry Norms may be added here	
In-house Norms	OEMs in-house Norms and standards may be referenced here, Ford Toxicology numbers, Ford spec numbers may be entered here.	



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Supplier	Material supplier	
Declarable/Prohibited Substances	All GADSL listed substances and RSMS Attachment 2 substances must be reported in Basic Substances field. The supplier must know the reason the substance is used. When sending the material description to Ford, IMDS will require the selection of an APPLICATION ID for each substance on the GADSL.	For PVC (material), chloroethylene polymer is the basic substance. See Ford Frequently Asked Questions for Application ID.
Jokers = Substance Wildcards	Jokers (e.g. "Misc.") must not be used to fill up a material to 100% substance disclosure. They must not be used to hide substances listed in the GADSL or RSMS Attachment 2. In cases where there is no other substance reporting opportunity a Joker can be accepted in amounts < 5% of the material composition.	A Joker is a pseudo substance in IMDS that has no substance information attached to it.
Flat Bill of Materials = Parts List (see Frequently Asked Questions)	Still require material content of major constituents (e.g. housings / polymer coated wires / circuit board material)	

Field	Requirement	Comment
<b>Recyclate Information</b> Previously called "Security/Environment" (Chapter 2 in IMDS)	<p>Questions 1-4 concern the recycled content of the part and are mandatory. Questions 1-4 ask for the content of recycled material in the part, <b>NOT</b> the recyclability of the part.</p> <p>1. Amount of contained recyclate as released? What is stated on the drawing or the documentation of the part?</p> <p>2. Amount of contained recyclate as measured? What is the actual content of recycled material in the part?</p> <p>3. Amount of contained recyclate – post-industrial recyclate? How much of the recycled content is from postindustrial waste (per part weight).</p> <p>4. Amount of contained recyclate - post consumer recyclate? How much of the recycled content is from post-consumer waste (per part weight)</p>	
<b>Part Number</b>	<p>The Ford End-Item part numbers. All prefix, base and suffix should be entered, " * " and "wildcards" are not allowed. Input "-" in between prefix, base and suffix.</p> <p>For service parts, please enter the engineering part number as follows:</p> <ul style="list-style-type: none"> <li>For all <b>non-WERS</b> origin-engineering parts, input with the engineering part number packed without delimiters or spaces (e.g., EA0332603D or E9WB17K831BAZJAE).</li> </ul>	<p>Must be entered as in the GMMGMM Supplier Portal part list.</p> <p>If the <b>non-WERS</b> origin engineering part number contains special characters (i.e., "-" or ".", etc.), enter them</p>

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	For all <b>WERS</b> origin-engineering parts, use the delimited prefix, base and suffix separated with hyphens (i.e., 6 character prefix-8 character base-8 character suffix) (e.g., 1F53-3K183-BA or -E800878-S201).	in their appropriate location within the packed number.
<b>Measured Weight</b>	The actual weight of the component, as measured by the supplier.	Must be inserted
<b>Calculated Weight</b>	The total weight of the material under the component	Must equal the Measured weight within the specified tolerance.

<b>Field</b>	<b>Requirement</b>	<b>Comment</b>
<b>Parts Marking</b>	<p>Polymeric or elastomeric parts (assembly components) shall be marked according to applicable standards (e.g. ISO 1043, ISO 1629, ISO 18064, ISO 11469). Your answer is mandatory if the component contains</p> <ul style="list-style-type: none"> <li>- more than 100 g of polymeric materials of the classification <b>5.x</b> (exception 5.2 and 5.3) or</li> <li>- more than 200 g of polymeric (elastomeric) materials of the classification <b>5.2 and 5.3</b>.</li> </ul> <p>An update of existing IMDS data is required if there are changes in polymeric / elastomeric parts marking.</p>	For reference see the <i>Ford E-4 Drafting Standard: MATERIAL IDENTIFICATION &amp; MATERIAL CODE PARTS MARKING</i>

**1.14 "Conflict Minerals"**

On August 22, 2012, the U.S. Securities and Exchange Commission (SEC) adopted final rules to implement the reporting and disclosure requirements concerning certain minerals. The term "conflict minerals" means:

- (i) Gold as well as columbite-tantalite (coltan), cassiterite, wolframite, or their derivatives, which are limited to tantalum, tin, and tungsten; and
- (ii) Any other mineral or its derivatives determined by the Secretary of State to be financing conflict in the Democratic Republic of the Congo or an adjoining country.

The above minerals are termed conflict minerals regardless of where they are mined, processed, or sold.

These rules require certain manufacturers to file reports with the SEC to disclose whether the products they manufacture or contract to manufacture contain conflict minerals "necessary to the functionality or production" of their products that are contributing to conflict in the Democratic Republic of the Congo or an adjoining country. These requirements were enacted to further the hu-



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manitarian goal of ending violent conflict and human rights abuses in the Democratic Republic of the Congo and adjoining countries, which have been partially financed by the exploitation and trade of conflict minerals.

### Annual Conflict Minerals Reporting Requirements

To comply with Dodd Frank Section 1502, Ford is required to file an annual Specialized Disclosure report with the SEC regarding its conflict minerals status. For the purpose of conflict minerals reporting, "Ford" means Ford Motor Company (US) and all of its consolidated subsidiaries. Suppliers that provide parts to Ford containing conflict minerals (as defined above) will be required to submit a Conflict Minerals Reporting Template (CMRT) to Ford annually by September 30. Ford will post Conflict Minerals Reporting Instructions on the Conflict Minerals section of the Ford Supplier Portal by May 31 of each year. Questions regarding conflict minerals reporting can be directed to [cmineral@ford.com](mailto:cmineral@ford.com).

### 1.15 IMDS and CAMDS Help Desk Contacts

IMDS **American** Service Center supporting **English** language  
Monday through Friday, 8 a.m. to 5 p.m. (CST)  
NEW phone: (+1) 844 650 4217 / NEW email: [imds-helpdesk-english@hpe.com](mailto:imds-helpdesk-english@hpe.com)

IMDS **European** Service Center supporting **English** language  
Monday through Friday, 8 a.m. to 4.30 p.m. (GMT+1)  
phone: (+36) 1 778 9821 / NEW email: [imds-helpdesk-english@hpe.com](mailto:imds-helpdesk-english@hpe.com)

IMDS **European** Service Center supporting **French and German** language  
Monday through Friday, 8 a.m. to 4.30 p.m. (GMT+1)  
phone: (+33) 1 57 32 4856 or (+36) 1 778 9821 / NEW email: [imds-helpdesk-emea@hpe.com](mailto:imds-helpdesk-emea@hpe.com)

IMDS **Japanese** Service Center supporting **Japanese and English** language  
Monday through Friday, 9 a.m. to 5.00 p.m. JST (GMT+9)  
phone: (+81) 3 4530 9270 / NEW email: [jpimds-helpdesk@hpe.com](mailto:jpimds-helpdesk@hpe.com)

IMDS **Korean** Service Center supporting **Korean** language  
Monday through Friday, 9 a.m. to 5.00 p.m. Seoul (GMT+9)  
phone: (+82) 2 2199 0203 ~ 4 / NEW email: [imdsk-helpdesk@hpe.com](mailto:imdsk-helpdesk@hpe.com)

IMDS **Chinese** Service Center supporting **Chinese** language  
Monday through Friday, 9:30 a.m. to 12:30 p.m., 1:30 p.m. to 5:00 p.m. BST (GMT+8)  
phone: (+86) 27 87431668 / NEW mail: [IMDS-EDS-Helpdesk-China@hpe.com](mailto:IMDS-EDS-Helpdesk-China@hpe.com)

CAMDS Service Center (Chinese Language Only)  
Monday through Friday, 8:30 a.m. to 12:00 a.m., 13:30 p.m. to 17:00 p.m. (GMT+8)  
Phone: (+86) 010-67832387 / 022-84379760 / email: [service@camds.org](mailto:service@camds.org)

## 2 Procedure - Post-Production Materials

### 2.1 Data Submission

**Service part information** is required to be reported individually, per their assigned Ford Engineering number. The majority of service parts are common with production parts; however service level details may require additional part reporting information. For production end item assemblies, the service component parts that make up that assembly **MUST** also be reported by their respective engineering num-



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bers, in accordance with Sect. 4.0 of this Specification. Ford Customer Service Division (FCSD) will require RSMS certification of all service parts and components prior to distribution of these parts.

**Spare parts** for servicing vehicles put on the market **prior to** 1 July 2003 containing Lead, Mercury, Cadmium and Hexavalent Chromium are exempted from complying with the material restrictions and reporting requirements **except for wheel balance weights, carbon brushes for electric motors, brake linings and convenience light switches**, which are still required to be reported and compliant (see Attachment 2 for countries outside North America and Japan not following EU ELV directive). Reporting requirements for spare parts, remanufactured and re-used service parts still apply if required by local or governmental law (e.g. European Union REACH Regulation).

**For further reporting requirements please refer to the section “Substance and Materials Reporting and Compliance” in the Ford Global Terms and Conditions (GTC). Ford GTC can be found at: <https://web.fsp.ford.com/gtc/index.jsp> (this link requires access to the Ford Supplier Portal through Covisint).**

**Spare parts** for servicing vehicles put on the market **after** 1 July 2003 containing Lead, Mercury, Cadmium and Hexavalent Chromium have to follow the same rules as production parts (Attachment 2 of this standard), **except, for the following spare parts where higher thresholds are allowed:**

- Aluminium for machining purposes with a lead content up to 2% by weight for vehicles put on the market before 1 July 2005
- Aluminium for machining purposes with a lead content up to 1.5% by weight for vehicles put on the market before 1 July 2008
- Lead in bearing shells and bushes for vehicles put on the market before 1 July 2008
- Lead in bearing shells and bushes in engines, transmissions and air conditioning compressors for vehicles put on the market before 1 July 2012
- Lead in solder for electronic circuit boards and other electrical applications for vehicles type approved before 31 December 2012
- Lead in pyrotechnic initiators for vehicles type-approved before 1 July 2006
- Lead in vulcanizing agents and stabilizers for elastomers in brake hoses, fuel hoses, air ventilation hoses, elastomer/metal parts in the chassis applications, and engine mountings for vehicles put on the market before 1 July 2005
- Vulcanising agents and stabilisers for elastomers in brake hoses, fuel hoses, air ventilation hoses, elastomer/metal parts in the chassis applications, and engine mountings containing up to 0.5% lead by weight for vehicles put on the market before 1 July 2006
- Lead in valve seats for engine types developed before 1 July 2003
- Hexavalent Chromium in corrosion preventive coatings for vehicles put on the market before 1 July 2007
- Mercury in discharge lamps for headlight applications and fluorescent tubes used in instrument panel displays for vehicles type approved before July 2012

These above mentioned spare parts are allowed for servicing of vehicles with parts containing lead or Hexavalent Chromium at the same level as **allowed** per RSMS requirements during the production of these vehicles.

### 3 Procedure – Non-Dimensional Materials and Hazardous Articles

#### 3.1 Data Submission

The *Global Materials Approval Process-e1291 System* (GMAP-e1291 ) is a single, web-based tracking tool that is used by suppliers to submit non-dimensional material compositions, associated regulatory data, hazardous materials / dangerous goods transportation information, and applicable MSDSs (in the required languages, designated by the requester of the product and indicated with an asterisk) to Ford Motor Company. The GMAP-e1291 system also allows suppliers to check the status of material re-



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quests processed through the GMAP-e1291 System and update materials information <https://fim.covisint.com/ap/ford?TARGET=https://web.emmg.ford.com/e1291/menu/>.

Any GMAP releasing process is initiated by the activity intending to use a new material which is not yet released for its usage in a Ford facility. Also materials being released for a certain application in a certain working environment must be re-reviewed using GMAP in an abbreviated process.

The Global Material Approval Process (GMAP) implements the Ford Automotive Operations Procedure FAP03-132. The document defines methods and functions to maintain Material Specifications, select and approve materials for Ford products, and perform OHS and environmental reviews. The GMAP system gives Ford employees the opportunity to participate in the material approval process. They can search for approved materials and specifications for new materials, submit requests for new materials and respond to acceptance and rejection of their requests. Authorized users can also review requests, accept or reject them and update material information.

There are three types of materials in GMAP:

- **Production materials** A dimensional or non-dimensional material which becomes part of a product marketed by Ford.
- **Post-production materials** A dimensional or non-dimensional material that is used to service a vehicle after it exits the assembly plant.
- **Non-production materials** do not become part of the product. There are two types of non-production materials: critical non-production and non-critical non-production. Critical non-production materials affect or may affect the product. Non-critical non-production materials do not affect the product (i.e., floor cleaner at an assembly plant).

Once a request is submitted through GMAP, it goes through a global material approval process called a review. Reviews accommodate both regional and local requirements and the process itself varies, dependent on the type of material being reviewed (production, non-production or post-production). Requesters may re-submit a request for approval of a material that has already been approved or rejected, which is called a re-review.

There are two types of GMAP users: requesters and approvers. Requesters use the system to search for approved materials or to submit requests for the approval of new materials. Approvers are authorized to review requests at defined points throughout the evaluation process. Security is controlled in GMAP through the web single login, which only allows users with a valid CDSID to log into the system (internal access) and through screen access control. GMAP administrators set up approvers and facilities in the system. Approvers are controlled by the approval activity that they are assigned to in the system.

**CHEMICAL DISCLOSURES:** Ford Motor Company requires disclosure of the Confidential Statement of Formula (CSF) of all substances within all non-dimensional materials and hazardous articles to a level of  $\geq 0.1$  % w/w in order to meet Health, Environmental regulatory and internal requirements, unless specified at a lower mass percent in the Restricted Substances Standard and List (RSMS & RSL resp.) or in the requirements for Toxicology evaluation and the clearance of materials, as mentioned in Section 3 - Requirements of this Standard.

**HANDLING OF CHEMICAL RANGES:** Use exact component percentages where possible. Where ranges are necessary, they should be no broader than 10% (e.g. 0-10%, 5-15%, 20-30%). Composition will either total exactly 100%, or the sum of the minimum ranges must be less than 100% but no less than 85%, and the sum of the maximum ranges must be greater than 100% but no more than 115%. Where ranges are given, they must reflect true possible values, and must be justifiable (e.g. cases of feedstock/supply-base variability) upon request.

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Classification and labeling of materials will be based on the upper level of the ranges stated for each component. Confidential formulation data submitted through the supplier portal will be held under the FORD Global Terms and Conditions (GTC).

### **MATERIAL SAFETY DATA SHEETS:**

**North America Production Materials:** Suppliers are now required to submit all three North American country languages/MSDS Standards (NOM STPS Spanish, OSHA English, WHMIS English and WHMIS French) with each e1291 data submission. The three languages will be required even after commonization of the MSDS Standards to the new GHS standard noted below.

**Many countries are moving to the new Globally Harmonized System of Classification and Labeling of Chemicals (GHS). Regional implementation Timing of GHS can be found at:**

[http://www.unece.org/trans/danger/publi/ghs/ghs\\_welcome\\_e.html](http://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html). Suppliers are required to submit GHS compliant Safety Data Sheets following the applicable requirements.

## **4 Frequently Asked Questions**

### **4.1 GMM Supplier Portal**

1. Outdated or obsolete part numbers are displaying on the GMM Supplier Portal for my company. How can I resolve these issues (*who within the program team can help to research and confirm these supplier claims*)?

**A: Contact your program team Design and Release engineers or the Ford Account manager to update the parts in WERS release systems, then the new Bills of Materials (BOM) will be updated, thus your GMM portal part list will also be updated accordingly.**

2. Parts that do not belong to my company or site are displaying on the Parent Level/Site Level Metrics screen in the GMM Supplier Portal. How can I remove these parts from my list?

**A: These parts are assigned to you in our Purchasing Database System. Please contact your Ford Buyer to correct the part sourcing listed in the Purchasing systems.**

3. My part has been "Rejected" – what does this mean and what should I do?

**A: This means that your parts are used in our vehicle calculations, but have significant errors in them that must be corrected. Please see questions 4 and 5 also.**

4. Why did my part get rejected? I have researched the part ingredients screen in IMDS and cannot identify the substance of concern that is causing this issue.

**A: This rejection means that your part conflicts with the RSMS standard and could be illegal! Please investigate immediately. Please make sure you selected the right "Application Code" for the substance and check that the amounts of your substances in the material / part do not exceed the violation threshold. Please study RSMS Attachment 2 in order to understand the applications for each substance.**

5. Why doesn't my part submission match to a BOM? What does not matched to BOM mean? Is it possible that I submitted the wrong part number? Is further action required by my company to fix these part submissions? My supplier report card shows that most of my part submissions are unmatched to a BOM, how should I resolve this issue?

**A: This can be for several reasons – your parts are service parts, your parts are in a previous model year BOM, you are not the Tier 1 supplier for these parts. In order to improve the matching, we ask every supplier to use GMM Supplier Portal to check which parts should be reported. If you reported parts that are not in the GMM Portal, you will most probably get an un-matched parts issue. You should report whatever parts are in the GMM Supplier Portal, and certify all the remaining parts supplied by your company meet the requirements of the RSMS. For Service parts please see the FAQ #21.**

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6. I have researched my parent level/site level metrics on the GMM Supplier Portal and have found some inconsistencies regarding part status. I have reported some of the parts in IMDS, but I am not given credit on the portal.

A: Please ensure that your data was sent to the correct company (e.g. Ford Motor Company Dearborn - IMDS Company ID 102), using the correct GSDB code. The GMM Supplier Portal is refreshed every 2 weeks, to match parts reported to BOMs. If you did send the data correctly, please wait 2 weeks to enable the supplier portal data to be refreshed.

7. What do the # signs listed as site codes in the GMM Supplier Portal represent? How can I fix this issue?

A: When we receive a datasheet, we attempt to match the part number and supplier code to Ford's Purchasing system in order to validate that the part is sourced to the parent supplier code it was submitted under, and to find the supplier site level codes. If a match cannot be found, the site code is defaulted to #####. Please contact your Ford Buyer to update your data in the Ford Purchasing system.

8. In the GMM Supplier Portal, my part number is mapped to the wrong site code. How can I resolve this issue?

A: See FAQ answers for #1, # 5 and #6.

9. How do I obtain access to the GMM Supplier Portal? Who is my company's Corporate Security Administrator?

A: Please review the information available on the FSP using the following links: "How to Request an Application" and "CSA Lookup" at <https://fim.covisint.com/ap/ford?TARGET=https://fsp.covisint.com>.

10. I no longer wish to receive the monthly status email from the GMM Supplier Portal. How do I change the contacts that will receive this email from Ford?

A: The person in your organization who receives the Ford's status report is up to you. You can change your contact info in the confirmation screen in GMM.

11. What are the criteria for me to update previously reported parts in IMDS?

A: Please see the clauses under 1.8 **Reporting IMDS datasheets**

12. Can you explain the RSMS certification process in IMDS and GMAP e1291? If I have submitted a certification for my parts, do I still need to provide individual part data?

A: By certifying to RSMS, suppliers are giving an assurance that their parts / materials are in compliance with the substance prohibitions in this version of the Ford Restricted Substance Management Standard (WSS-M99P9999-A1). Every production and service part that is shown in the GMM Supplier Portal and will be going thru PPAP/PSW has to be reported in IMDS.

For the parts which are not in the GMM Supplier Portal/Service Part List, and parts which need not to be reported in IMDS, your RSMS Certification will ensure they are in compliance with the substance prohibitions in this version of the RSMS.

You still need to submit the individual part data if the part number is listed in the GMM Supplier Portal, even you submitted the certification.

For non-dimensional production materials, suppliers need to access GMAP e1291 in <https://fim.covisint.com/ap/ford?TARGET=https://web.emmg.ford.com/e1291/menu/> to certify before 12/31/2018. Supplier needs to first confirm and enter contact information and then can certify in the certification page. A list of toxicology numbers of the materials the supplier supplied to Ford will be shown. If the material is obsolete or no longer shipped to Ford, the supplier needs to comment in the comment field. If the supplier has more materials supplied to Ford, but they are not listed in the certification screen, the supplier needs to contact Ford engineers to do Re-review for these missing materials in GMAP. This year, only Production non-dimensional materials will be in scope, non-production and post production non-dimensional materials will be included in the future.





## 4.2 General Questions

13. How should I obtain the necessary data from my sub-suppliers? My sub-suppliers will not comply with my requests for data?

A: You must cascade the same requirements, e.g., RSMS to your sub-suppliers and let them understand this is required by laws/customers. Appropriate measures must be taken if they cannot comply, since this will put you and Ford in non-compliant position. If you are unable to resolve the issue, contact your STA Engineer and/or buyer for further assistance.

14. I don't understand what I need to do in order to meet Ford requirements? Where can I find the Ford documentation?

A: Ford has always published Ford's requirements/guidelines in IMDS Public page. You can check details in IMDS Website <https://public.mdsystem.com>, Help, OEM Specific Info, Ford Motor Company, to check RSMS package and other information released by Ford.

15. Who should complete certification for my company? Am I the appropriate person to complete this task?

A: The authorized personnel from your site or corporate office that understands Ford's requirements and understands your company compliance status should certify on behalf of your site or the whole company in IMDS.

16 How do I obtain the necessary information on consignment parts that I ship to Ford?

A: Contact your Ford buyer to confirm your contractual responsibilities. However, if the sub-tier suppliers have Ford end-item part numbers for the parts, you should advise them to send the parts information to you and to Ford using "Propose" function in IMDS. In cases where it is Ford's responsibility to provide data, please contact Ford personnel in each brand/region listed in the Ford Reporting Guidelines to get advice.

17 Who receives the notification email from Ford when a part is rejected? How can I change that contact person or add myself as a contact?

A: Whoever submitted the data sheet in IMDS will get the emails. You cannot change that contact person once the data sheets are sent out. If you want to receive notifications, you have to send the data under your contact information.

18. What are the non-dimensional material reporting process/requirements?

A: Suppliers must report non-dimensional production and non-production materials and hazardous articles (e.g., dry friction pad) through the GMAP e1291 process following the requirements in GMAP e1291 before December 31, 2018. Certain regions may not be able to use GMAP e1291 pending on the roll out of the process and systems. All non-dimensional production and non-production material suppliers must certify compliance to RSMS in GMAP-e1291 no later than December 31, 2018. Please access RSMS non-dimensional material certification page through <https://fim.covisint.com/ap/ford?TARGET=https://fsp.covisint.com>.

19. If I am a manufacturer, and I send my materials to a distributor, and I don't have a Ford GSDB code, what can I do?

A: Suppliers as distributors must cascade the RSMS requirements to your manufacturers and facilitate the manufacturers to comply with RSMS. Manufacturers, who produce MSDS for the production materials supplied to Ford, must certify your compliance to RSMS in GMAP e1291 before December 31, 2018. Manufacturers can apply for a special Ford GSDB code so that you can enter Ford GMAP e1291 process.

20. What are the substance application codes and its associated process?



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A: Application codes are a way for the supplier to tell Ford whether a particular substance in Ford's RSMS is used in a legal or prohibited application. For every substance in the RSMS, Ford requires an appropriate application code.

21. How can I know which service parts Ford wants us to report?

A: To find updated service parts lists, please visit <https://web.purinfo.ford.com/> (follow the Purchase Order Information link). If you have trouble obtaining access to the FCSD site, please contact Carly Demek at [CDemek@ford.com](mailto:CDemek@ford.com)

22. I have a part including a substance listed in RSMS Attachment 2, which is not a Global Automotive Declarable Substance List (GADSL) substance. Do I have to report in IMDS?

A: Yes, you have to report, provided the Attachment 2 listed substance is referenced to a product or an application. – With respect to hard parts' IMDS reporting Ford's RSMS Attachment 2 is the same as the GADSL. However, RSMS does also control substances included in non-production (process) materials which are beyond the GADSL listed substances. Ford recommends that for substance reporting suppliers follow the IMDS Recommendations (minimum requirement) and will accept data sheets created by following Recommendation 001.

23. If I add an in-process substance that converts to a GADSL/RSMS Attachment 2 substance in the manufacturing process, is this considered "unintentionally added"?

A: No. It is considered intentionally added and must be reported or eliminated.

24. How far back do I need to report past model service parts-are parts prior to 2003 MY excluded?

A: Past Model Service Parts are those parts no longer used in production but still produced for service.

Exemption status and reporting requirements for Service parts for vehicles built before and after 1 July 2003 are specifically addressed in Sect 2.0 of 2016 RSMS Reporting Requirements.

Because of pending and potential substance restriction regulatory legislation (i.e. asbestos, mercury, etc.), FCSD will require IMDS RSMS certification for all (Even ELV Exempted 2003MY and prior) past model parts, but 100% material and GADSL/RSMS Attachment 2 substance reporting in IMDS is not required, unless the vehicle application is 2004MY or later.

Reporting requirements still apply for all parts if required by local or governmental law (e.g. European Union REACH Regulation). **For further reporting requirements please refer to the section "Substance and Materials Reporting and Compliance" in the Ford Global Terms and Conditions (GTC).**

Based on the above direction suppliers who submit IMDS data for past model service part vehicles built after 1 July 2003 (2004MY) may get a rejection notice, which they will just have to ignore for now. Not until a final EU ELV ruling on service parts is issued, will Ford add the part and model year application intelligence in GMM to allow ELV/RSMS Heavy metals in past model parts.

All parts must be in compliance with the current years RSMS with some exceptions (FCSD Service Parts-Section 4.4). Modification of parts to remove the RSMS substances of concern will be decided on case by case basis, as directed by Ford Engineering. Suppliers are not authorized to modify parts to remove RSMS substances without Ford Approval, and documenting the change via WERS or the Supplier Request for Engineering Approval (SREA) process.

25. Where do I get an Asia Pacific Program parts list on the GMM Supplier Portal?

A: Select the Region—Asia Pacific, then you can see the Programs listed. In case you have any question, please contact Janet Yin at [wjin4@ford.com](mailto:wjin4@ford.com).

26. Why does the information in the "Supplier's Part Number" column differ from that in the "Ford Part Number" column on the Site Level Metrics screen?



## 2018 Restricted Substance Management Standard Reporting Requirements and Guidelines

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A: The supplier's part number may fuzzy match to the Ford Part Number. The Ford fuzzy match algorithm will match part submissions to the first character of the part suffix, with the exception of colored parts and parts that do not have a prefix. Colored parts are defined as either containing a "W" as the third or fourth character of the suffix or when the suffix is greater than four characters in length. Please note that if there are multiple matches for the same Brand/Part Number/Parent GSDB/Site GSDB, the latest submission received by GMM will be retrieved and may not necessarily be the highest suffix match.

27. How do I furnish proof for the Production Part Approval Process (PPAP) submission?

A: Suppliers should use the GMM Supplier Portal Total Parts Submitted via IMDS report to furnish proof of RSMS compliance for PPAP. In order to access the GMM Supplier Portal Manual, users must log in to the GMM Supplier Portal application and click the "Help" button that is located in the header.

28. Are there any special GMM report printing instructions for the Production Part Approval Process (PPAP)?

A: When printing the GMM Supplier Portal Total Parts Submitted via IMDS report for the PPAP submission package, make sure to repeat the header information of the report (i.e., top 6 rows of the report) when there are multiple pages in the worksheet. This will allow you to include in the PPAP submission packet, only the page of the report containing the relevant part submission information. Refer to the File/Page Setup menu options (Sheet tab) in Microsoft Excel to designate the rows to repeat at the top of the spreadsheet.

29. I do not understand the Conflict Mineral Requirements?

A. Please send questions to [cmineral@ford.com](mailto:cmineral@ford.com)

30. Are the RSMS requirements included in a Global Terms and Conditions Web Guide?

A: Yes, please refer to <https://web.fsp.ford.com/gtc/docs/envguide.pdf>

31. Where do I find country specific supplements to the Global Terms and Conditions?

A. Refer to the following website for country specific supplements:  
<https://web.fsp.ford.com/gtc/production/index.jsp?category=supplements>.

32. I am a dimensional supplier, if all substances are required to be declared at 0.1% or lower how do keep my proprietary (i.e. trade secret) material composition information hidden in my IMDS datasheets?

A. Only specific substances listed in [Attachment 2](#) and GADSL cannot be hidden. For all other substances up to 5 % can be hidden by either blinding out the confidential information or by using wild cards like "Misc."

33. Is CAMDS reporting required for all China produced vehicle programs?

A: For new vehicle programs produced in China starting from MY19, suppliers are required to directly report in CAMDS. For ongoing production vehicle programs produced in China, suppliers will be required to report in CAMDS as requested by CAF/JMC to support vehicle homologation activity, suppliers can choose either do CAMDS reporting themselves or Ford will do the data transfer as mentioned in CAMDS reporting and data transfer requirement section.

34. Where can I get training for CAMDS reporting?

A: If you have any issues regarding CAMDS reporting or want CAMDS reporting training, please contact Huang Dong([DHUANG25@FORD.COM](mailto:DHUANG25@FORD.COM)) for CAF parts OR Wu Jianlin([JWU23@JMC.COM.CN](mailto:JWU23@JMC.COM.CN)) for JMC parts.

35. How can I get a CAMDS account to do the CAMDS reporting?

A: Please contact Huang Dong([DHUANG25@FORD.COM](mailto:DHUANG25@FORD.COM)) for CAF parts OR Wu Jianlin([JWU23@JMC.COM.CN](mailto:JWU23@JMC.COM.CN)) for JMC parts to create CAMDS account ID for your company.

36. How do I meet the coming Management and Implementation Rules for the Automobile Hazardous Substances and Recyclable Utilization Rate Consistency in China?



## 2018 Restricted Substance Management Standard Reporting Requirements and Guidelines

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A: There will be high risk parts lists (approximate 54 parts) which are targeted for spot check to be declared later with the publishing of Management and Implementation Rules for the Automobile Hazardous Substances and Recyclable Utilization Rate Consistency. Suppliers are required to conduct tests on these high risk parts for prohibited substances specified in China GB/T 30512-2014 as demanded by CAF & JMC. Refer to China GB/T 30512-2014 for test methods. The test report must be delivered before the GPDS <PEC> (for powertrain is gateway <Unit TD>) gateway or 8 months before vehicle (powertrain) <MP1> (Job 1), whichever comes first.

37. What is required to meet the new S. Korea "Guideline for verification of compliance with the restrictions on the concentration of hazardous substance in the Electrical and Electronic Equipment and Motor Vehicles - MOE Notification 613 (2017.10.20)"?

A. When Ford receives a request for data for specific parts the supplier is required to provide physical test data as specified in the South Korean MOE Notification No. 613.

38. How should I report parts with color variations/suffixes?

A. Colored parts are defined as either containing a "W" as the third or fourth character of the suffix or when the suffix is greater than four characters in length. Ford strongly recommends that suppliers report all colored suffixes listed in the GMM supplier portal metrics in IMDS. However if this is not possible the supplier may report to the abbreviated "W" (in-white) suffix level, this is a generic suffix level that will cover reporting for all colors due to Ford Fuzzy Matching logic. Please be aware that if a supplier chooses to report to the "W" suffix level it is their responsibility include the substance composition of one of the colors in the IMDS report and the color reported must be the worst case scenario from a substance compliance standpoint.

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# 2018 RSMS

## Substances Being Considered for Prohibition

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The substances listed below are currently being considered for restrictions in vehicle components based on recent regulatory inquiry and assessments. They are not under consideration for restriction in processing chemicals.

### Background

The substances selected by Ford are found on the following government lists:

- U.S. EPA Toxic Substances Control Act (TSCA) Work Plan Chemicals (<http://www.epa.gov/assessing-and-managing-chemicals-under-tsca/tsca-work-plan-chemicals>)
- REACH Substance of Very High Concern List (<http://echa.europa.eu/web/guest/candidate-list-table>)
- Canada's Chemical Management Plan – Certain Organic Flame Retardants ([http://www.chemicalsubstanceschimiques.gc.ca/group/flame\\_retardant-ignifuges/index-eng.php](http://www.chemicalsubstanceschimiques.gc.ca/group/flame_retardant-ignifuges/index-eng.php))
- California Department of Toxic Substances Control (DTSC) – Safer Consumer Products (Green Chemistry) Program Priority Products List and Priority Products Work Plan (<http://www.dtsc.ca.gov/SCP/index.cfm>)

If an assessment associated with the substances indicated a significant risk to human health or the environment, and the substance was likely found in vehicle components, it was selected for the list below.

### Substance Being Considered For Future Restriction In Vehicle Components

Substance Name	Substance CAS #
TDCPP	13674-87-8
TCEP	115-96-8
TCPP	13674-84-5

It is recommended (but not required) that a voluntary phase out of these substances be pursued in vehicle components.

### Substances subject to the Global Sustainable Materials Strategy (SMS)

Expanded efforts will be made, over and above the RSMS, to certain non-dimensional high volume commodities such as:

- Paints & Related, Adhesives & Sealers, and Hydrocarbons (Globally)
- Chemical Buys (NA).

Affected suppliers will be contacted to participate in review of material alternatives to support the strategy.

## 2018 RSMS ELV Lead Expiration Dates

<b>Materials and Components</b>	<b>Expiration Date of Exemption (“Ban Date”) relates to Vehicle Type approved</b>
Lead as an alloying element: 1(b). Continuously galvanized steel sheet containing up to 0.35% lead by weight	1 January 2016
Lead and lead compounds in components: 6. Vibration dampers	1 January 2016
Lead and lead compounds in components: 8(a). Lead in solders to attach electrical and electronic components to electronic circuit boards and lead in finishes on terminations of components other than electrolyte aluminum capacitors, on component pins and on electronic circuit boards	1 January 2016
Lead and lead compounds in components: 8(h). Lead in solder to attach heat spreaders to the heat sink in power semiconductor assemblies with a chip size of at least 1 cm <sup>2</sup> of projection area and a nominal current density of at least 1 A/mm <sup>2</sup> of silicon chip area	1 January 2016
Lead and lead compounds in components: 8(i). Lead in solders in electrical glazing applications on glass except for soldering in laminated glazing Note: compare with 8(j)	1 January 2016
Lead and lead compounds in components: 10(c). Lead in dielectric ceramic materials of capacitors with a rated voltage of less than 125 V AC or 250 V DC	1 January 2016
Lead and lead compounds in components: 8(f). (a). Lead in compliant pin connector systems Note: new split in 8(f) (a) and 8(f) (b) – “mating area” ; 8(f)(b) to be reviewed in 2019	1 January 2017
Lead and lead compounds in components: 10(d). Lead in the dielectric ceramic materials of capacitors compensating the temperature-related deviations of sensors in ultrasonic sonar systems	1 January 2017
Lead and lead compounds in components: 12. Lead-containing thermoelectric materials in automotive electrical applications to reduce CO2 emissions by recuperation of exhaust heat	1 January 2019
Lead and lead compounds in components: 5(a). Lead in batteries in high voltage systems (>75 V DC) that are used only for propulsion in M1 and N1 vehicles	1 January 2019
Lead and lead compounds in components: 8(j). Lead in solders for soldering of laminated glazing Note: compare with 8(i)	1 January 2020

In most regions the restriction of ELV substances depends on the date when the vehicle type has been put on the market the first time. Ford now makes the expiration date of the exemption the restriction or ban dates rather than using types approval dates. If you have questions about your components / parts and type approval implications please contact [RSMSHELP@FORD.COM](mailto:RSMSHELP@FORD.COM).

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## **TSCA Reform- Chemicals Undergoing Review**

The Toxic Substances Control Act underwent reform in 2016. The final law, issued in June 2016, laid out a process for EPA to perform risk evaluations of chemicals. The law affects both non-dimensional and dimensional materials. It is anticipated that action will be taken on several chemicals over the next few years. Global restrictions will continue to be communicated in future versions of the Ford RSMS.

We recommend that our suppliers begin studying these chemicals to identify whether a voluntary phase out of these substances should be pursued in advance of requirements. Additionally, if suppliers are currently not using these chemicals, we recommend that you do not begin use due to potential future regulations.

The chemicals for review are listed below, separated into "EPA Fast-Tracked Chemicals" and "EPA Risk Evaluation Chemicals." The regulatory process for review of these chemicals is different depending on the category. EPA restrictions are anticipated to come first for "EPA Fast-Tracked Chemicals."

### **EPA Fast-Tracked Chemicals**

By statute, EPA must take expedited action on certain persistent, bioaccumulative, and toxic (PBT) chemicals. EPA will not be conducting risk evaluations on these actions. Rules must be proposed by June 2019. EPA has designated the following chemicals for the expedited review process.

<b><u>CAS</u></b>	<b><u>Chemical Name</u></b>
1163-19-5	Deca BDE ( <i>Currently prohibited per Ford's RSMS</i> )
87-68-3	Hexachlorobutadiene (HCBd) (used in rubber compounds and lubricants)
133-49-3	Pentachloro-thio-phenol (PCTP) (used to make rubber more pliable)
68937-41-7	Tris (4-isopropylphenyl) phosphate (flame retardant)
732-26-3	2,4,6-Tris(-tert-butyl)phenol (often used as oil/ lubricant additive)

### **EPA Risk Evaluation Chemicals**

By statute, EPA must begin risk evaluations for 10 chemicals/chemical groupings by June 2018. EPA determines what risk management actions to take, if any, following risk evaluations. The following chemicals have been designated for review first.

<b><u>CAS</u></b>	<b><u>Chemical Name</u></b>
123-91-1	1,4 dioxane
106-94-5	1 bromopropane
79-01-6	Trichloroethylene (TCE) ( <i>Currently prohibited per Ford's RSMS</i> )
56-23-5	Carbon tetrachloride ( <i>Currently prohibited per Ford's RSMS</i> )
25637-99-4	Cyclic Aliphatic Bromide Cluster- HBCD ( <i>Currently prohibited per Ford's RSMS</i> )
3194-55-6	Cyclic Aliphatic Bromide Cluster- 1,2,5,6,9,10-Hexabromocyclododecane
3194-57-8	Cyclic Aliphatic Bromide Cluster- 1,2,5,6-Tetrabromocyclooctane
75-09-2	Methylene chloride ( <i>Currently prohibited per Ford's RSMS</i> )
81-33-4	Pigment Violet 29
127-18-4	Perchloroethylene (PERC) ( <i>Currently prohibited per Ford's RSMS</i> )
872-50-4	N-methyl-2-pyrrolidone (NMP)
None given	Asbestos ( <i>Currently prohibited per Ford's RSMS</i> )

## **EPA TSCA Chemical Reporting Requirements**

In 2017, EPA finalized new chemical reporting rules including the TSCA Inventory Notification Active/Inactive Rule and the Nanoscale Material Information Gathering Rule. All suppliers are required to provide substance notification or meet material reporting requirements according to new or future reporting rules.

## **California DTSC – Safer Consumer Products (Green Chemistry) Program Priority Products**

The current version of the California Department of Toxic Substances Control (DTSC) 2018-2020 Priority Product Work Plan proposes lead acid batteries for consideration as a potential Priority Product. A Priority Product is a consumer product identified by DTSC that contains one or more chemicals – known as Candidate Chemicals – that could be subject to DTSC regulation following an alternatives assessment. Lead-acid batteries contain three Candidate Chemicals: lead, arsenic, and sulfuric acid. DTSC must issue a Work Plan every three years that identifies the product categories DTSC will evaluate during that three-year period to identify Priority Products.

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