# RESTRICTED SUBSTANCE MANAGEMENT STANDARD

January 1, 2016

# RESTRICTED SUBSTANCE MANAGEMENT STANDARD

## INTRODUCTION

Federal-Mogul has issued this standard in order to help ensure that Federal-Mogul, and customers using our parts and components, fully meet applicable legal and customer standards regarding materials used in our products and theirs. This Restricted Substance Management Standard (RSMS) seeks to inform you, our suppliers, of the materials we must exclude from our products altogether and the limits we have on the amount of certain other materials. These restrictions are primarily based on environmental or other related concerns.

Ford Motor Company is a major Federal-Mogul customer and has extensive product content requirements, not limited to those specified by law and those required by the IMDS (International Material Data System) and listed in the Global Automotive Declarable Substance List (GADSL). Rather than publishing our own specific list of materials, Federal-Mogul has chosen to use the Ford Motor Company's Engineering Material Specification WSS-M99P9999-A1 – Restricted Substances Management Standard and the Global Automotive Declarable Substances List (GADSL) as the basis for our RSMS.

Federal-Mogul's RSMS originally took effect on April 1, 2004 and this new version is effective on January 1, 2016. We will clarify or modify the standard periodically to seek to be consistent with the most current updates to GADSL, the Ford RSMS, changes to public law or other customer requirements. However, it is ultimately the responsibility of each supplier to ensure that they are in compliance with the most current version of applicable laws governing product content, as well as the requirements of this standard.

If you are currently shipping to us materials that contain substances prohibited by this standard, or amounts of substances that exceed concentration or weight limits specified in the standard, please notify your Supply Chain representative as soon as possible. Suppliers which cannot provide verification of compliance with this standard, or who do not indicate they have an effective plan in place to meet the standard promptly, are subject to termination as suppliers.

Federal-Mogul expects that the statements made by its suppliers will be based on good faith, expert judgment and/or testing that the supplier is already doing or has done. For certain materials, Federal-Mogul may determine that all or particular suppliers will need to perform and send to us the results of periodic tests on product content. Federal-Mogul will contact affected suppliers if and when such requirements may be needed.

To fulfill the EU legislation EC 1907/2006 "REACH", suppliers are required to send information on articles that contain greater than 0.1% of Substances of Very High Concern (SVHC), including the name of the SVHC, and its safe use to the Federal-Mogul site(s) to which the article(s) is(are) shipped.

If you have any questions regarding the Federal-Mogul RSMS, please contact your Supply Chain representative.

## 1. SCOPE

This specification gives requirements related to environment health and safety for substances, materials and products supplied to Federal-Mogul. It includes references to National and International Government legislation as well as requirements necessary to meet internal standards and customer specifications.

The purpose of this standard is to inform suppliers to Federal-Mogul of restrictions pertaining to certain substances. By regulation or by Federal-Mogul direction, these substances shall be restricted in or excluded from parts, materials, equipment, machinery and/or tooling, hereinafter referred to as "product(s), supplied to and /or manufactured by Federal-Mogul or intended for use in Federal-Mogul products". This standard supplements but does not supersede the responsibility of each supplier to comply with laws and regulations for the receiving Federal-Mogul location(s). It is the duty of all Suppliers of product to comply with this Restricted Substance Management Standard. This specification is not a definitive statement of National and International legislation, and cannot be relied upon as such. In addition to this specification, suppliers are themselves responsible for ensuring compliance with any legislation that may affect them or their product.

## 2. APPLICATION

This specification applies to all chemicals, consumable processing materials, raw materials, finished materials, components, or articles that are supplied to Federal-Mogul. The requirements apply to any supplier to any Federal-Mogul facility worldwide.

## 3. REQUIREMENTS

The primary intent of this Standard is to control restricted substances within formed articles or within materials such as minerals or powders that Federal-Mogul will incorporate into formed articles. However, it should be noted that any materials which are intrinsically hazardous, or which form or release hazardous substances during use, recycling or disposal, are also subject to these requirements. Approval according to these requirements must be completed prior to supply of product to Federal-Mogul.

It may be necessary for the supplier to divulge, in confidence, detailed compositional, toxicity, and health and safety information on his products on request from Federal-Mogul.

It is the duty of all Suppliers of product to Federal-Mogul to comply with this Restricted Substance Management Standard.

Any request for exception must be approved by ***Federal-Mogul's Global EHS Department***.

### 3.1 ALL PRODUCTS

3.1.1 In addition to information required for compliance to this Standard, Supplier 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 Federal-Mogul site. Prior to making any change to the composition or hazard labelling of such products, the supplier shall request approval from the appropriate Federal-Mogul site(s).

3.1.2 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.

3.1.3 All products shall be supplied in compliance with the regulations on substance REGISTRATION, NOTIFICATION OR NEW CHEMICALS/SUBSTANCES, PACKAGING AND LABELLING which are in place in the Federal-Mogul receiving location(s) where the products are supplied.

3.1.4 Materials, including chemicals, and articles that contain substances which have been identified as having any CARCINOGENIC, MUTAGENIC, REPRODUCTIVE TOXICITY, ECOTOXICITY, or SENSITISING PROPERTIES (see Definitions, Appendix 1) by testing or human experience, shall not be supplied or submitted without prior notification to and acknowledgement from Federal-Mogul.

3.1.5 Products of or from ENDANGERED SPECIES must not be supplied to Federal-Mogul in any form.

3.1.6 Instructions 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/Pub1202_web.pdf

For additional radiation protection information see document Radiation Protection 122 (2000 and 2002, respectively).

http://ec.europa.eu/energy/nuclear/radioprotection/publication/doc/122_part1_en.pdf
http://ec.europa.eu/energy/nuclear/radioprotection/publication/doc/122_part2_en.pdf
http://www-pub.iaea.org/MTCD/publications/

Note: Radioactive sources or devices used in manufacturing processes are exempted.

**3.2 SUBSTANCE RESTRICTIONS**

3.2.1 Substance Restrictions are identified in Table 1 by substance name, type of restriction, threshold limit (where applicable), applications affected/exempted, and effective dates.

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.

3.2.3 Substances designated as "Declarable" (D) when present in a material or part, and are legally regulated, projected to be regulated or required to be tracked for information gathering purposes. These substances shall not be supplied in any products without prior notification to, and acknowledgement from Federal-Mogul.

3.2.4 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.

3.2.5 It is the supplier's responsibility to ensure that they identify all affected substances – some of which may not be specifically identified in Table 1 of this Standard but reference other sources/lists such as substances listed in the Global Automotive Declarable Substance List (GADSL, http:///www.gadsl.org),.

3.2.6 This Standard identifies substances and applications that are currently prohibited, as well as some that will become prohibited at a specific future date. Suppliers should ensure that they will comply with these future prohibitions of substances by the dates shown in Table 1 of this Standard.

3.2.7 For products imported to regions country with specific standards (e.g., the EU End of Life Vehicle Directive, REACH or similar standards), it is the Supplier's responsibility to meet all applicable requirements of those regional or country specifc standards.

4. GENERAL INFORMATION

4.1 Definitions for technical terms are provided in Appendix 1.

4.2 Relevant national and international legislation are provided in Appendix 2.

4.3 Link to the REACH Candidate List of Substances of Very High Concern is provided in Appendix 3.

Table 1 – Substance Restrictions

| Row Number | Substance[a] | Classification | GADSL (to be reported in IMDS) | Threshold [b] | Applications Affected | Effective Date |
|---|---|---|---|---|---|---|
| 1 | Acetaldehyde | D | Yes | 0.1% | All Products | Immediate |
| 2 | Acetamide | D | Yes | 0.1% | All Products | Immediate |
| 3 | Acetamide, N-methyl | D | Yes | o.1% | All Products | Immediate |
| 4 | Acetonitrile | D | Yes | 0.1% | All Products | Immediate |
| 5 | Acrylamide | D | Yes | 0.1% | All Products | Immediate |
| 6 | Acrylonitrile | D | Yes | 0.1% | All Products | Immediate |
| 7 | Amines, carcinogenic, which are formed from Azo-dyes | P | Yes | 0.1% | All Products | Immediate |
| 7.1 | Amines, carcinogenic, which are formed from Azo-dyes – Specific Applications | P | Yes | 0.003% (30ppm) | Textiles & leather | Immediate |
| 8 | Amines, which can form carcinogenic Nitrosamines | D | Yes | 0.1% | All Products | Immediate |
| 9 | 4-Aminobiphenyl or its salts | P | Yes | 0.01% | All Products | Immediate |
| 10 | Ammonium perchlorate | D | Yes | 0.1% | All Products | Immediate |
| 11 | Ammonium Salts | P | No | 0% | Cellulose Wadding Insulation Materials | Immediate |
| 12 | Aniline and its salts | D | Yes | 0.1% | All Products | Immediate |
| 13 | 9,10-Anthracenedione,1-[(5,7-dichloro-1,9-dihydro-2-methyl-9-oxopyrazolo[5,1-b]quinazolin-3-yl)azo]- | D | Yes | 0.1% | All Products | Immediate |
| 14 | Antimonytrioxide (Diantimonytrioxide) | D | Yes | 0.1% | All Products | Immediate |
| 15 | Aromatic amines and their salts (See GADSL) | D | Yes | 0.01% | All Products | Immediate |
| 16 | Arsenic or its compounds (see GADSL for complete listing) | P/D | Yes | Prohibited at 0.01% (unless present in metals & alloys then declarable at 0.05%) | All Products | Immediate |
| 16.1 | Organoarsenic compounds | P | Yes | 0.01% | All Products | Immediate |
| 17 | Asbestos | P | Yes | Not Detectable | All Products | Immediate |
| 17.1 | Asbestos forms – fibers | P | Yes | Not Detectable | All Products | Immediate |
| 17.2 | Asbestos forms – minerals – all members | P | Yes | Not Detectable | All Products | Immediate |
| 18 | Barium compounds (organic or water soluble) | D | Yes | 1.0% | All Products | Immediate |
| 19 | Benzene | P | Yes | 0.01% | All Products ) except those listed below | Immediate |

| Row Number | Substance[a] | Classification | GADSL (to be reported in IMDS) | Threshold [b] | Applications Affected | Effective Date |
|---|---|---|---|---|---|---|
| 19.1 | Benzene | D | Yes | 0.1% | Fuel constituent | Immediate |
| 20 | Benzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentene (BNST) | D | Yes | | | |
| 21 | 1,4-Benzenediamine, N,N' -mixed Ph and tolyl derivs | D | Yes | | | |
| 22 | 1,4 Benzenediol (Hydroquinone) | D | Yes | | | |
| 23 | Benzidine and its salts | P | Yes | 0.1%(d) | All Products | Immediate |
| 24 | 2-Benzothiazolesulphenamide, N, N-dicyclohexyl- | D | Yes | Any intentionally added content must be reported | All Products | Immediate |
| 25 | Beryllium or its compounds (See GADLS for complete listing) | D | Yes | 0.1% | All Products | Immediate |
| 25.1 | Beryllium or its compounds | P | Yes | 0.1% | Dry friction Material (e.g., brake or clutch pad) | Immediate |
| 26 | Biocidal coatings / biocidal additives – Declarable Applications (See GADLS for complete listing) | D | Yes | 0.1% | All Products | Immediate |
| 26.1 | Biocidal coatings / biocidal additives - Prohibited Applications (See GADLS for complete listing) | P | Yes | 0.1% | All Products | Immediate |
| 27 | Boric Acid / Orthoboric acid | D | Yes | 0.1% | All Products | Immediate |
| 28 | Brominated flame retardants<br>Note: Separate Table 1 entries/classifications exist for the following members of this group:<br>• Polybrominated biphenyls [PBB]<br>• Polybrominated diphenyl ethers [PBDE],<br>• Tris(2,3-dibromopropyl)phosphate [TRIS] | D (see separate entries) | Yes (f) | 0.1% | All Products | Immediate |
| 28.1 | Hexabromocyclododecane (HBCDD) | D | Yes | 0.1% | All Products | Immediate |
| 28.2 | Hexabromocyclododecane (HBCDD) | P | Yes | 0.1% | Vehicle interior fabric | Immediate |
| 28.3 | Tetrabromobisphenol A (TBBPA) | D | Yes | 0.1% | All Products | Immediate |
| 29 | Butadiene (1,3 - Butadiene ) | D | Yes | 0.1% | All Products | Immediate |
| 30 | Butylphenol (2(2H-1,2,3-benzotriazol-2-yl)-4,6-ditert)- | P | Yes | 0.1% | UV Stabilizer in Plastics | Immediate |
| 31 | Cadmium or its compounds (See GADLS for complete listing) | P | Yes | 0.01% | All applications except those listed below | Immediate |
| 31.1 | Cadmium or its compounds | D | Yes | 0.01%(ff) | Valid Exemptions according to ELV Annex II | Immediate |

| Row Number | Substance[a] | Classification | GADSL (to be reported in IMDS) | Threshold [b] | Applications Affected | Effective Date |
|---|---|---|---|---|---|---|
| 32 | Canadian Prohibition of Certain Toxic Substances Regulations | D | Yes | (g) | All Products | Immediate |
| 32.1 | Canadian Chemical Challenge Program Substances Phase I (see link found in endnote (g) for CAS#) | D | Yes | (g/h) | All Products | Immediate |
| 32.2 | Canadian Chemical Challenge Program Substances Phase II | D | | 0.0% (g/h) | All Products | Immediate |
| 32.3 | Canadian Hazardous Products Act (see link found in end note (gg) for CAS#) | D | Yes | 0.1% (carcinogens) 1.0% (non-carcinogens | All Products | Immediate |
| 33 | Carbon disulfide | D | No | 0.1% | All Products | Immediate |
| 34 | Carcinogenic Substances (See Appendix 1 for definition) | D | No | 0.1% | All Products | Immediate |
| 35 | Chlorinated Ethers (Select) | | | | | |
| 35.1 | Bis(Chloromethyl) ether (BCME) | P | Yes | (h) | All Products | Immediate |
| 35.2 | Chloromethyl methyl ether | P | Yes | (h) | All Products | Immediate |
| 35.3 | NCC ether | P | Yes | (h) | All Products | Immediate |
| 36 | Chlorinated or brominated Dioxins or Furans | P | Yes | 10 ppb | All Products | Immediate |
| 37 | Chlorinated hydrocarbons: | | | | | |
| 37.1 | Carbon tetrachloride (Tetrachloromethane) | P | Yes | 0.1% | All Products | Immediate |
| 37.2 | 1,1,2,2-Tetrachloroethane | D | Yes | 0.1% | All Products | Immediate |
| 37.3 | 1,1,1,2 Tetrachloroethane | D | Yes | 0.1% | All Products | Immediate |
| 37.4 | Pentachloroethane | D | Yes | 0.1% | All Products | Immediate |
| 37.5 | Pentachlorobenzene | P | Yes | (h) | All Products | Immediate |
| 37.6 | Tetrachlorobenzenes (TeCB) | P | Yes | (h) | All Products | Immediate |
| 37.7 | Trichlorobenzenes | P | Yes | 0.1% | All Products in the EU | Immediate |
| 37.8 | Trichloromethane (Chloroform) | D | Yes | 0.1% | All Products | Immediate |
| 37.9 | 1,1,2 Trichloroethane | D | Yes | 0.1% | All Products | Immediate |
| 37.10 | 1,1 Dichloroethylene (Vinylidene chloride) | D | Yes | 0.1% | All Products | Immediate |
| 37.11 | 1,1,1 Trichloroethane (Methyl chloroform) | P | Yes | 0.1% | All Products | Immediate |

| Row Number | Substance[a] | Classification | GADSL (to be reported in IMDS) | Threshold [b] | Applications Affected | Effective Date |
|---|---|---|---|---|---|---|
| 38.12 | Dichloromethane (Methylene chloride) | D | Yes | 0.1% | All Products | Immediate |
| 38.13 | Trichloroethylene (Trichloroethene) | P | Yes | (h) | All Products | Immediate |
| 38.14 | Tetrachloroethylene (Perchloroethylene) | D | Yes | 0.1% | All Products | Immediate |
| 39 | Chlorinated Paraffins (consult GADSL for specific listings and classifications) | | | | | |
| 39.1 | Short Chain Chloroparaffins, - (C10 to C13) (SCCPs) | P | Yes | 0.1% | All Products | Immediate |
| 39.2 | Medium Chain Chloroparaffins, - (C14 to C17) (MCCPs) | D(j) | Yes | 0.1% | All Products | Immediate |
| 39.3 | Long Chain Chloroparaffins, – (C18 to C28) (LCCPs) | D(j) | No | 0.1% | All Products | Immediate |
| 40 | Chlorofluorocarbons (CFC's) | P | Yes | 0.1% | All Products - except those below: | Immediate |
| 40.1 | Chlorofluorocarbons (CFC's) | D | Yes | 0.1% | CFCs used to service existing equipment where legally permitted | Immediate |
| 41 | Chromium(VI)-salts (Cr+6; Hexavalent) | P | Yes | 0.1% (k) | All Products | Immediate |
| 42 | Cobalt or its compounds | D | Yes | 0.0%(g/h) | All Products | Immediate |
| 43 | Colophony (Rosin) | D | Yes | 0.1% | All Products | Immediate |
| 44 | Conflict Minerals including Tin, Tantalum, Tungsten, Gold and their Derivatives (hh) | D | No | 0% (cc) | All Products | Immediate |
| 45 | Copper, metallic | D | Yes | 0.1% | All Products | Immediate |
| 45.1 | Copper, metallic | P | Yes | 5.0% | Brake Friction Materials | 1 Jan 2021 |
| 45.2 | Copper, metallic | P | Yes | 0.5% | Brake Friction Materials | 1 Jan 2025 |
| 46 | Cyclododecane, hexabromo- (HBCD) | D | Yes | 0.1% | All Products | Immediate |
| 47 | Cyclohexane | D | Yes | 0.1% | All Products | Immediate |
| 48 | Diamino-diphenyl-methane (4,4`-Diaminodi-phenylmethane) | P | Yes | 0.1% | All Products | Immediate |
| 49 | Dichlorodiphenyltrichloroethane (DDT) | P | No | 0% | All Products | Immediate |
| 50 | Dichloropropanol (1,3-Dichloro-2-propanol) | D | Yes | 0.1% | All Products | Immediate |
| 51 | Dimethlyformamide | D | Yes | 0.1% | All Products | Immediate |
| 52 | Dimethylfumarate | P | No | 0% | All Products | Immediate |
| 53 | Diorgano-tin compounds | | | | | |
| 53.1 | Diorgano-tin compounds (e.g. dialkyltin compounds) | D | Yes | 0.1% | All Products | Immediate |

| Row Number | Substance[a] | Classification | GADSL (to be reported in IMDS) | Threshold [b] | Applications Affected | Effective Date |
|---|---|---|---|---|---|---|
| 53.2 | Dibutyltin (DBT) | P | Yes | 0.1% | All Products in EU for supply to general public | Immediate |
| 53.3 | Dioctyltin (DOT) | P | Yes | 0.1% | Textile articles intended to come into contact with the skin for use by general public in EU | Immediate |
| 53.4 | Dioctyltin (DOT) | P | Yes | 0.1% | Wall and floor coverings for use by general public in EU | Immediate |
| 53.5 | Dioctyltin (DOT) | P | Yes | 0.1% | Two component room temperature vulcanization moulding kits (RTV-2 moulding kits) | Immediate |
| 53.6 | Dioctyltin (DOT) | P | Yes | 0.1% | gloves; footwear or part of footwear intended to come into contact with the skin in EU | Immediate |
| 54 | Dodecachloropentacyclo1,3,4-Metheno-1H-cyclobuta(cd)pentalene, (Mirex) | P | Yes | 0%(h) | All Products | Immediate |
| 55 | Epichlorohydrin (1-chloro-2,3-epoxypropane) | D | Yes | 0.1% | All Products | Immediate |
| 56 | Ethanol, 2-(2-methoxyethoxy)- | D | Yes | 0.1% | All Products | Immediate |
| 57 | Fluorotelomers (see GADSL for complete listing) | D | Yes | 0.1% | All Products | Immediate |
| 58 | Formaldehyde (Free) | D | Yes | 0.001% (10 mg/kg) | Interior trim (by weight of finished parts) | Immediate |
| 59 | Glycols or their Acetates | | | | | |
| 59.1 | 2-Methoxyethanol (2ME) | P | Yes | 0.5%(ii) | All Products | Immediate |
| 59.2 | 2-Methoxypropanol | D | Yes | 0.1% | All Products | Immediate |
| 59.3 | 2-Methoxyethyl acetate | D | Yes | 0.1% | All Products | Immediate |
| 59.4 | 2-Ethoxyethanol | D | Yes | 0.1% | All Products | Immediate |
| 59.5 | 2-Butoxyethanol | D | Yes | 0.01% (l) | All Products | Immediate |
| 60 | Halons | P | Yes | 0.1% | All Products - except those below: | Immediate |

| Row Number | Substance[a] | Classification | GADSL (to be reported in IMDS) | Threshold [b] | Applications Affected | Effective Date |
|---|---|---|---|---|---|---|
| 60.1 | Halons | D | Yes | 0.1% | Halons used to service existing equipment where legally permitted | |
| 61 | Hexachlorobenzene (HCB) | P | Yes | 20 ppb | All Products | Immediate |
| 61.1 | Hexachlorobenzene (HCB) | D | Yes | 10 ppb | All Products | Immediate |
| 62 | Hexachloro-1,3-butadiene (HCBD) | P | Yes | (h) | All Products | Immediate |
| 63 | Hexachlorocyclohexane, gamma isomer, Lindane | D | Yes | 0.1% | All Products | Immediate |
| 64 | Hydrazine | D | Yes | 0.1% | All Products | Immediate |
| 65 | Hydrobromofluorocarbons (HBFC's) | P | Yes | 0.1% | All Products - except those below: | Immediate |
| 65.1 | Hydrobromofluorocarbons (HBFC's) | D | Yes | 0.1% | HBFCs used to service existing equipment where legally permitted | |
| 66 | Hydrochlorofluorocarbons (HCFC's) | P | Yes | 0.1% | All Products - except those below: | |
| 66.1 | Hydrochlorofluorocarbons (HCFC's) | D | Yes | 0.1% | HCFCs used to service existing equipment where legally permitted | Immediate |
| 67 | Hydrofluorocarbons (HFC's) | P | Yes | 0.1% | All Products - except those below: | |
| 67.1 | Hydrofluorocarbons (HFC's) | D | Yes | 0.1% | HFCs used to service existing equipment where legally permitted | Immediate |
| 68 | Hydrogen Sulfide | D | No | 0.1% | All Products | Immediate |
| 69 | Lead or its compounds (see GADSL for complete listing) | P | Yes | 0.1% | All products except those specified in CURRENT ELV Annex II (EU-D 2000/53)) or RoHS Recast Annex III (EU-D 2011/65) | Immediate |
| 70 | Mercury or its compounds | P | Yes | 0.1% | All products except low mercury content fluorescent lamps | Immediate |
| 71 | Methanol | D | Yes | 0.1% | All Products | Immediate |

| Row Number | Substance[a] | Classification | GADSL (to be reported in IMDS) | Threshold [b] | Applications Affected | Effective Date |
|---|---|---|---|---|---|---|
| 72 | Methylacrylamidomethoxy-acetate | D | Yes | 0.1% | All Products | Immediate |
| 73 | 1-Methyl-2-pyrrolidinone (2-Pyrrolidinone, 1-methyl) | D | Yes | 0.1% | All Products | Immediate |
| 74 | Methylcyclopentadienyl manganese tricarbonyl (MMT) | P | No | 2 mg of Manganese per litre | Fuel in EU | Immediate |
| 75 | Mineral fibers (Natural or Synthetic) except Continuous Filament Fibers (r) | D | Yes | 0% | All Products | Immediate |
| 75.1 | Ceramic fibers (r) | D | Yes | 0% | All Products | Immediate |
| 76 | Monomethyldibromodiphenylmethane | P | Yes | 0.1% | All Products | Immediate |
| 77 | Monomethyldichlorodiphenylmethane | P | Yes | 0.1% | All Products | Immediate |
| 78 | Monomethyltetrachlorodiphenylmethane | P | Yes | 0.1% | All Products | Immediate |
| 79 | Naphthalene | D | Yes | 0.1% | All Products | Immediate |
| 80 | 2-Napthylamine and its salts | P | Yes | 0.01% | All Products | Immediate |
| 81 | Nickel or its compounds | D | Yes | 0.1% | All products, except stainless steels and alloys containing metallic nickel | Immediate |
| 81.1 | Nickel or its compounds | P | Yes | 0.1% | Dry Friction Materials (e.g. brake and clutch pads) | Immediate |
| 82 | Nitrites | D | Yes | 0.1% | Additives in engine coolants, vulcanizing agents in rubber products, anticorrosion surface additive. | Immediate |

| Row Number | Substance[a] | Classification | GADSL (to be reported in IMDS) | Threshold [b] | Applications Affected | Effective Date |
|---|---|---|---|---|---|---|
| 83 | 4-Nitrobiphenyl and its salts, all members | P | Yes | 0.1% | All Products | Immediate |
| 84 | N-Nitrosoamines/N-Nitrosoamides | D | Yes | 0.1% (t) | All Products | Immediate |
| 85.1 | N-Nitrosoamines/N-Nitrosoamides | P | Yes | 0.1% (t) | Metalworking fluids containing mixtures of nitrites and amines/ amides that may form N-Nitrosamines/ N-Nitrosamines | Immediate |
| 85.2 | N-Nitroso-dimethylamine | P | Yes | 0%(h) | All Products | Immediate |
| 86 | Nonylphenols | P | No | 0.1% | Detergent (surfactants), cleaners, metal working products, Cooling Tower Chemicals, and wastewater treatment plant chemicals, and any products added to waters that enter cooling towers and/or wastewater treatment plant | Immediate |
| 86.1 | Nonylphenols | D | No | 0.1% | All Products | Immediate |
| 87 | Nonylphenol ethoxylates | P | Yes (c) | 0.1% | Detergent (surfactants), cleaners, metal working products, Cooling Tower Chemicals, and wastewater treatment plant chemicals, and any products added to waters that enter cooling towers and/or wastewater treatment plant | Immediate |
| 87.1 | Nonylphenol ethoxylates | D | Yes | 0.1% | All Products | Immediate |
| 88 | Octylphenol | D | No | 0.1% | All Products | Immediate |
| 89 | Octylphenol ethoxylate | D | No | 0.1% | All Products | Immediate |

| Row Number | Substance[a] | Classification | GADSL (to be reported in IMDS) | Threshold [b] | Applications Affected | Effective Date |
|---|---|---|---|---|---|---|
| 90 | Pentachlorobenzene | P | Yes | 0%(h) | All Products | Immediate |
| 91 | Pentachlorophenol (PCP) or its salts | P | Yes | 0.0005% (5 ppm) | All Products | Immediate |
| 92 | Perchlorates | D | Yes | 0.1% | All Products | Immediate |
| 93 | Perfluoroalkyl sulfonates (PFAS) | P | No | 0.001% | Chemical Preparations | Immediate |
| 94 | Perfluoro-octane sulfonates and its derivatives (PFOS) C8F17SO2X (X=OH, Metal salt, halide, amide and other derivatives including polymers) | P | Yes | 0.1% | All Products | Immediate |
| 95 | Perfluoro-octanoic acids (PFOA) and its salts, C8F1502X (X=H, NH4, and Metals salts) | D | Yes | 0.1% | All Products | Immediate |
| 96 | Phenol | D | Yes | 0.1% | All Products | Immediate |
| 97 | Phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethlethyl)- | P | Yes | 0.1% | All Products | Immediate |
| 98 | Phenol, 2,4,6-tris(1,1-dimethylethyl)- | D | Yes | 0.1% | All Products | Immediate |
| 99 | Phenol, 2-(5-chloro-2H-benzotriazol-2-yl)-4,6-bis(1,1'-dimethylethyl)- | D | Yes | 0.1% | All Products | Immediate |
| 100 | Phenylenediamines or its salts | D | Yes | 0.1% | All Products | Immediate |
| 101 | Phosphoric acid, tris(2-methylphenyl) ester | D | Yes | 0.1% | All Products | Immediate |
| 102 | Phthalates | D | Yes | 0.0% (g/h) | All Products | Immediate |
| 103 | Polyamine Curing Agents (includes Hexamines) | D | Yes | 0.1% | Interior trim (by weight of finished parts) | Immediate |
| 104 | Polybrominated biphenyls (PBB) | P | Yes | 0.001% | All Products | Immediate |
| 105 | Polybrominated diphenyl ethers (PBDE), including Decabromodiphenyl ethers (deca BDE) | P | Yes | 0.1% | All Products | Immediate |

| Row Number | Substance[a] | Classification | GADSL (to be reported in IMDS) | Threshold [b] | Applications Affected | Effective Date |
|---|---|---|---|---|---|---|
| 106 | Polybrominated Terphenyls ( PBT ) | D | Yes | 0.001% | All Products | Immediate |
| 107 | Polychlorinated Biphenyls ( PCB ) | P | Yes | Not Detectable(aa) | All Products | Immediate |
| 108 | Polychlorinated Naphthalenes | D | Yes | 0.1% | All Products | Immediate |
| 109 | Polychlorinated Terphenyls ( PCT ) | P | Yes | 0.001% | All Products | Immediate |
| 110 | Polycyclic aromatic hydrocarbons (PAH; PCAH) | D | Yes | See individual thresholds (x) | Vehicle-related parts | Immediate |
| 111 | Pyrotechnical compounds | D | Yes | 0.1% | All Products | Immediate |
| 111.1 | Ammonium Perchlorate | D | Yes | 0.1% | Pyrotechnical Compound | Immediate |
| 111.2 | Nitrocellulose | D | Yes | 0.1% | Pyrotechnical Compound | Immediate |
| 111.3 | Sodium Azide | D | Yes | 0.1% | Pyrotechnical Compound | Immediate |
| 112 | Radioactive substances (including scrap metal contaminants) | P | Yes | (bb) | All Products, except substances and devices used in the manufacturing process | Immediate |
| 112.1 | Radioactive substances | D | Yes | (bb) | Substances and devices used in the manufacturing process | Immediate |
| 113 | REACH Candidate List Substances of Very High Concern (SVHCs) and Authorization List (Annex XIV) Substances | | | | | |
| 113.1 | SVHCs (Substances of Very High Concern) according to REACH (dd) | D | Yes | 0.1% | All Products | Immediate |
| 113.2 | REACH Authorization List (Annex XIV) Substances | D | Yes | 0.1% | All Products | Declarable before Sunset Date |

| Row Number | Substance[a] | Classification | GADSL (to be reported in IMDS) | Threshold [b] | Applications Affected | Effective Date |
|---|---|---|---|---|---|---|
| 113.3 | REACH Authorization List (Annex XIV) Substances | P | Yes | 0.1% | All Products | Prohibited after Sunset Date |
| 114 | Selenium and its compounds (see GADSL for complete listing) | D | Yes | 0.1% | All Products | Immediate |
| 115 | Silica, Crystalline - Quartz | D | Yes | 0%(cc) | All Products | Immediate |
| 117 | Styrene (Vinyl benzene ) | D | Yes | 0.1% | All Products | Immediate |
| 118 | Styrene oxide (Epoxy styrene) | D | Yes | 0.1% | All Products | Immediate |
| 119 | Sulfur Hexafluoride | P | Yes | 0% | Vehicle applications | Immediate |
| 119.1 | Sulfur Hexafluoride | D | No | 0.1% | All Products | Immediate |
| 120 | Tetrafluoromethane | P | Yes | 0.1% | All Products | Immediate |
| 121 | Thallium or it's compounds | D | Yes | 0.1% | All Products | Immediate |
| 122 | Thioperoxydicarbonic diamide ([(H2N)C(S)]2S2), tetramethyl- ("Thiram") | D | Yes | 0.1% | All Products | Immediate |
| 122 | Toluene | D | Yes | 0.1% | All Products | Immediate |
| 122.1 | Toluene | P | No | 0.1% | Adhesives and spray paints intended for sale to the general public in the EU | Immediate |
| 123 | o-Toluidine generating substances | D | Yes | 0.1% | All Products | Immediate |
| 124 | Tris(2-chloroethyl)phosphate | D | Yes | 0.1% | All Products | Immediate |
| 125 | Trichlorophenol or its salts | D | Yes | 0.1% | All Products | Immediate |
| 126 | Trichloropropane (1,2,3 - Trichloropropane ) | D | Yes | 0.1% | All Products | Immediate |
| 127 | Trimethylphosphate | D | Yes | 0.1% | All Products | Immediate |

| Row Number | Substance[a] | Classification | GADSL (to be reported in IMDS) | Threshold [b] | Applications Affected | Effective Date |
|---|---|---|---|---|---|---|
| 128 | Triorgano-tin compounds (trialkyl- and triaryltin compounds) | P | Yes | 0.1% | All articles including Vehicle related parts | Immediate |
| 128.1 | Triorgano-tin compounds (trialkyl- and triaryltin compounds) | D | No | 0% | All products other than articles | Immediate |
| 128 | Triphenylphosphate | D | Yes | 0.1% | All Products | Immediate |
| 129 | Tris(1,3-dichloro-2-propyl)phosphate | | | | | |
| 130 | Tris-(1-aziridinyl) phosphine oxide | P | Yes | 0.1% | All Products | Immediate |
| 131 | Tris(2,3-dibromopropyl)phosphate [TRIS] | P | Yes | 0.1% | All Products | Immediate |
| 132 | Wollastonite | D | No | Non Detectable | All Products | Immediate |
| 133 | Vinyl chloride | P | Yes | 0.0005% (5 ppm as monomer) | All Products | Immediate |
| 134 | Any substance that is mined and not otherwise listed in this Table | D | No | Non Detectable | All Products | Immediate |
| | | | | | | |

## Table 1 End Notes:

a) All substances listed in Table 1 must be immediately declared if their current percent content by weight, per homogeneous material exceeds the stated threshold for future prohibition.
b) Certain substances are subject to a specified upper threshold, stated as weight percent content in a material (see the definition of "Material" in Appendix 1). Suppliers must report content if substances exceed listed the threshold percentage, by weight per homogeneous material (See definition of Homogeneous Material in Appendix 1). 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.
c) Only Nonylphenol ethoxylates on the GADSL are required to be reported in IMDS.
d) Benzidine and Benzidine Dihydrochloride are prohibited at any concentration, if intentionally added for the Canadian market. Benzidine or its salts are prohibited above 0.1% for all other markets.
e) The threshold applies to cleaved amine content in materials. For recycled fibers, until 1 January 2005, the allowable threshold is 0.007%. EU Directive 76/769/EEC, 19th Amendment provides further technical guidance on which azodyes are affected.
f) PBB, PBDE and TRIS are GADSL listed
g) See GADSL, Reference List, available as a downloadable file at http://wwwgadsl.org and in the “News” section of IMDS at, http://www.mdsystem.de/index.jsp.http://www.chemicalsubstanceschimiques.gc.ca/challenge-defi/list-eng.php
h) Prohibited if intentionally added at any concentration
i) Currently in North America, Chemical Abstract s Service (CAS#s) listed in TSCA (http://www.epa.gov/srs/) are insufficient to distinguish between short, medium and long chain length, and only “generic” CAS#s are available, and MUST be used in declarations.
j) In North America various feedstocks used to create chlorinated paraffins/olefins are known to contain short-chain length paraffins/olefins resulting in the presence of SCCPs within the MCCPs & LCCPs upon chlorination. Hence, non-dimensional products containing medium & long chain chloroparrafins/olefins require documentation that their presence does not cause exceedance of the SCCP threshold of 0.1% by weight. Sufficient documentation includes the following:
    1. Product name (as shown on the MSDS) of the chlorinated paraffin/olefin blended within the subject product and its weight percent within the final product, and
    2. full disclosure of the weight percent of each short-chain length paraphin/olefin within the feedstock of the chlorinated paraffins/olefin in the final product
k) 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).
l) Exceedance to threshold limits for select products requires permits, see: http://www.cc.gc.ca/CEPARegistry/documents/regs/g2-14026_r1.pdf
m) NA = Not Applicable
n) Components must be identified for dismantling, if the average per vehicle lead content exceeds 60 grams for electronic circuit boards, electrical components that contain lead in a glass or ceramic matrix compound (except bulbs and spark plugs) and all other electric applications.
o) Components must be made identifiable for pre-treatment.
p) The lead exemption for vibration dampers is meant as a temporary design fix for vibration issues encountered late in new program development. These dampers are expected to be designed out as soon as practical.
q) Also applications with future effective dates for prohibitions are declarable.
r) See Appendix 1, definition for FIBER
s) Test Method BSEN1811 can be accessed at http://www.cenorm.be/
t) Residual N-Nitrosoamines/N-Nitrosoamides in cured polymeric articles need not be reported, nor will be subject to, the Prohibition at less than or equal to the stated threshold of 0.1 %, which is considered to reflect the aggregate mass percent of all carcinogenic N-Nitrosoamines/N-Nitrosoamides present.
u) For Chemical Preparations.
v) For semi-finished products.
w) For coated materials.
x) See GADSL, Reference List, available as a downloadable file at **http://www.gadsl.org** and in the "News" section of IMDS at, http://www.mdsystem.de/html/en/home_en.htm.
y) Institute of Petroleum test method for PAH content can be found at http://www.energyinst.org.uk/
z) The PAH's to be reported are identified under PAH definition in Appendix 1.
aa) Per SW-846 Method 8082; samples must be ground and composited by contract laboratory so that a representative sub-sample(s) is used for analysis; only heated soxhlet solvent extraction shall be used; lowest achievable MDL are expected; highest acceptable MDL must not exceed most stringent US State/Local requirement – currently 490ppb - this must be affirmed at time of testing.) Matrix dependent alternate method will be considered by Ford. For concrete recycling, this method must be coupled with representative sampling methods specified in EQO Memorandum EQR05-047_US.
bb) Above background radiation.
cc) Any intentionally introduced content must be reported.
dd) See http://echa.europa.eu/ for more information. A link to the Candidate List of SVHC is provided for reference in Appendix 3.
ee) reserved

ff) Declarable 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 if present at any concentration

gg) http://www.canlii.org/en/ca/laws/regu/sor-88-64/latest/sor-88-64.html

hh) Declaration is required if Conflict Minerals are present. Conflict Minerals are defined as columbite-tantalite (coltan, niobium, tantalum), cassiterite (tin), gold, and wolframite (tungsten), and their derivatives.

ii) Prohibited ≥ 0.5% w/w in Diethylene glycol methyl ether. Any intentionally added content in hard parts

jj) **APPENDIX 1**

## DEFINITIONS

**ARTICLE:**

Under the definition provided by the US Occupational Safety and Health Administration (OSHA), “Article” means a manufactured item other than a fluid or particle:

1) which is formed to a specific shape or design during manufacture
2) which has end use function(s) dependent in whole or in part upon its shape or design during end use
3) which under normal conditions of use does not release more than very small quantities, e.g. minute or trace amounts of a hazardous chemical (as determined under section 1910.1200(d) of volume 29 of the US Code of Federal Regulations), and does not pose a physical hazard or health risk

**BIOCIDES:**

Additives intended to prevent or restrict microbiological growth.

**CARCINOGENS:**

Including:

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 Programme (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 carcinogen listed by the Deutsche Forschungs Gemeinschaft (DFG) in the latest edition of their Maximale Arbeitsplatz Konzentration (MAK) list in Categories 1-2 and 3-5 (as listed in the Ford Restricted Substance List)
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”)
7) substances classified as Category 1 or 2 carcinogens under the provisions of the European EC Directives on the Classification, Packaging and Labelling of Dangerous Substances and Dangerous Preparations (EC Council Directive 67/548/EC3).

**CONFLICT MINERALS (D)**

Conflict Minerals, which include columbite-tantalite (coltan, niobium, tantalum), cassiterite (tin), gold, and wulframite (tungsten), and their derivatives, must be disclosed under the Section 1502 of the Dodd Frank Wall Street Reform and Consumer Protection Act. The disclosure requirement exists regardless of where components and materials are purchased.

**DECLARABLE**

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.

**ENDANGERED SPECIES (PRODUCTS OF):**

Includes any substance or material that originates from an endangered species. Lists of endangered species include:

1. Latest "International Union for Conversation 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 in its amendments.
3. United States Endangered Species Act.
4. UNEP-WCMC Species Database http://sea.unep-wcmc.org/species/dbases/about.cfm.

**EU ELV (End of Life Vehicle) DIRECTIVE**:

European Union Directive 2000/53/EC on ELV's
http://europa.eu.int/

**FIBER:**

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

**HAZARDOUS:**

Hazardous substances/materials are those that have the capacity of producing injury or illness through ingestion, inhalation, or absorption through any body surface, or creating an adverse effect upon the environment.

**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 same for all substances forming or being an ingredient of the material (e.g., impurities) at any spot of measurement. The opposite: an inhomogenous 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.

**GLOBAL AUTOMOTIVE DECLARABLE SUSTANCE LIST (GADSL):**

This is a common list of substances agreed by all of the automobile manufacturers that subscribe to IMDS. The purpose of this list is to commonize the reporting requirements for all users of IMDS (http//www.gadsl.org).

**MACHINING:**

Material formed and shaped by tool.

**MATERIAL:**

Within the text of this Standard means the primary medium that may contain a "substance", which is restricted by this Standard. Acceptable material descriptions are Industry standards or Federal-Mogul standards / specifications. Where these are not available to define the material, a Supplier's standards / specification may be used.

**MATERIAL, DIMENSIONAL:**

Dimensional items are those having their own shape and are essentially solid. Most are considered "articles" (See definition of "Article")

**MATERIAL, NON-DIMENSIONAL:**

Non-dimensional items are those that have no intrinsic shape without containing structure. Examples of these items are fluids, gases, powders and semi-solids (pastes) like adhesives and greases.

**MATERIAL, NON-PRODUCTION:**

Non-production materials are those materials used in Federal-Mogul facilities which do not remain on products marketed by Federal-Mogul.

**MATERIAL, POST-PRODUCTION:**

Post-production materials are those materials used to service a vehicle after it exits the assembly plant.

**MATERIAL, PRODUCTION:**

Production materials are those materials used for the fabrication of production parts, complete vehicles, or other materials that remain on products marketed by Federal-Mogul.

**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 classified as Category 1, 2 or 3 mutagens under the provisions of the EC Directives on the Classification, Packaging and Labelling of Dangerous Substances and Dangerous Preparations.

**NEW PRODUTION PARTS:**

New Production Parts are newly drawn parts that are not in current production or carried over from previous production.

Parts are not considered new parts if only the part number changes, in line with current practices (i.e., the prefix changes to accommodate a year change, or a suffix changes to accommodate a minor engineering change of a current part).

**OZONE DEPLETING SUSBTANCES (ODS):**

Ozone Depleting Substances (ODS) – are defined as chemicals that have been linked to the depletion of the stratospheric ozone layer, and restricted under that 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 – 2037/2000/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 extender oils in tires (Directive 2005/69/EC, for EU markets) from January 1, 2010 require the sum of the following 8 PAH's NOT to exceed 10mg/kg:
Benzo(a)pyrene CAS # 50-32-8 (individual concentration not to exceed 1 mg/kg)
Benzo(e)pyrene CAS # 192-97-2
Benzo(ah)anthracene CAS # 56-55-3
Chrysene CAS # 218-01-9
Benzo(b)fluoranthene CAS # 205-99-2

Benzo(j)fluoranthene CAS # 205-82-3
Benzo(k)fluoranthene CAS # 207-08-9
Dibenzo(ah)anthracene CAS # 53-70-3

These limits are regarded as kept, if the PAH extract is <3% by mass, as measured by the Institute of Petroleum standard IP346.

**PERCENT (%) BY WEIGHT:**

Unless otherwise stated, the ratio of the masses of the individual substance and material (see definition of "Material" above) containing the substance multiplied by 100.

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

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

**PRODUCT(S):**

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

**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 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. If prohibited substances are identified in products supplied to Federal-Mogul, they must be reported and suppliers must institute immediate corrective measures.

**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 re-used by the industry within the original manufacturing process. Examples include materials which are regranulated 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.

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 totalled 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 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")
2. Substances classified as Category 1, 2 or 3 due to adverse effects of fertility, or their developmental toxicity under the provisions of the EC Directives on the Classification, Packaging and Labelling of Dangerous Substances and Dangerous Preparations

**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 re-application of the same substance" (refer to Federal Hazardous Substances Act 16 CFR 15.00.3(b)(9)
3. Are classified as inhalation or contact sensitizers under the provisions of the EC Directives on the Classification, Packaging and Labelling of Dangerous Substances and Dangerous Preparations

4. Are classified as such according to the World Health Organisation “criteria for classification of skin and airway sensitizing substances in the work and general environments” (1996)

**SUBSTANCE:**

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

## APPENDIX 2

## RELEVANT NATIONAL AND INTERNATIONAL LEGISLATION

Examples of National and International legislation that are relevant to these requirements are indicated below. These lists are not comprehensive and do not necessarily represent the current issue of that legislation by way of amendments or supplement.

It is the supplier's responsibility to avail himself of these and other pertinent regulations from the appropriate regulation authority, when relevant to his product.

a) **INTERNATIONAL** (Abbreviations shown at end of list)

1. 67/548/EEC Classification, Packaging and Labelling of Dangerous Substances
2. 75/442/EEC Waste
3. 76/403/EEC Disposal of PCB's and PCT's
4. 76/464/EEC Discharge of Dangerous Substances in Aquatic Environment
5. 76/769/EEC Restrictions on Marketing and Use of Certain Dangerous Substances and Preparations
6. 78/319EEC Toxic Waste Disposal
7. 78/610/EEC Worker Protection from VCM
8. 78/831/EEC Notification of New Substances
9. 80/779/EEC Air Quality Limits
10. 80/1107/EEC Protection of Workers from Risks of Chemical / Physical / Biological Age Agents
11. 83/264/EEC Tris (Aziridinyl) Phosphinoxide & PBB's
12. 83/477/EEC Worker Protection from Asbestos Risks
13. IATA Dangerous Goods Regulations 1983
14. ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air
15. (ADR) Euro Agreement on International Carriage of Dangerous Goods by Road
16. (RID) International Regulations on Carriage on Dangerous Goods by Rail
17. CEFIC Labelling Code
18. OECD Good Laboratory Practice (GLP)
19. IMO International Maritime Dangerous Goods Code (IMDG)
20. REACH Registration, Evaluation and Authorization of Chemicals (REACH) European Union (EU) No. 1927/2006
21. 83/478/EEC Restrictions on Marketing and use of Asbestos
22. 92/2455/EEC Council regulations on import / export of dangerous substances 94/3135/EEC
23. 91/549/EEC Council regulations on substances that deplete the ozone layer
24. 94/3093/EEC Italian Regulations
25. 89/677/EEC List of carcinogenic and mutagenic materials 94/60/EEC
26. Directive 2000/53/EC of the European Parliament and the council of 18th September 2000 on the end of life vehicles

b) **USA**

1. Occupational Safety & Health Act
2. Toxic Substances Control Act
3. Resource Conservation & Recovery Act
4. Hazardous Material Transportation Act
5. Clean Air Act
6. Clean Water Act
7. Consumer Product Safety Act
8. Poison Prevention Packaging Act
9. Federal Hazardous Substances Act
10. Endangered Species Act
11. Dodd-Frank Wall Street Reform and Consumer Protection Act, Section 1502

c) **SPAIN**

1. Order 15993 of 1977-06-28 on Chemicals Labelling
2. Crown Decree 668, 1980-04-14 Storage of Dangerous Substances
3. Decrees 20507, 1982-07-21 & 24732, 1984-10-31 Controlling Asbestos Risks

d) **BELGIUM**

1. General Regs. For Employment Protection Titel 111 Chap 111 Royal Decree 1980-04-09.

    1.1 Benzene / Toluene / Xylene prohibitions, Art 723a 15.3
    1.2 Vinyl Chloride Monomer prohibitions, Art 723a 15.6
    1.3 Controlled Production & Use Subs. Art 723a 16 & App V.

e) **SWEDEN**

1 Ordinances 1973:334 and SFS 1979:771 Cadmium Prohibition
2 Ordinances AFS 1981:23 & AFS 1983:21, Asbestos
3 Ordinances AFS 1981:12 Certain Nitrosamines
4 Ordinances SNFS 1982:5 PK: 14, Classification & Labelling of Hazardous Substances & Preparations

f) **DENMARK**

1 Order 468 of 1979-11-13 & 148 of 1980-04-30 on Asbestos

2 Order 540 of 1982-09-02 on Substances & Materials
3 Order 408 of 1980-09-17, Classification, Packaging, Labelling, Sale & Storage of Dangerous Products

g) **ITALY**

1 Law No. 245, 1963-03-05, Limitation on Use of Benzene / Toluene / Xylene in Work Activities
2 Presidential Decree 303, 1956-03-19 on Hygiene at Work (Aromatic Amines)

h) **NETHERLANDS**

1 Decree 547, 1978-10-26 on Aerosols-Chlorofluoromethanes
2 Decree 413, 1983-09-06, Asbestos Decree (Goods Act)

j) **GREAT BRITAIN**

1 Clean Air Act 1960
2 Control of Pollution 1974
3 Health & Safety at Work etc. Act 1974
4 Carcinogenic Substances Regulations, SI's 1967/879, 230, 1975
5 Notification of New Substances Regulations, SI 1982/1496
6 Asbestos (Prohibitions) Regulations, SI 1985/910

k) **GERMANY**

1 Carcinogenic Substances Control Law, 1980-07-29

l) **SWITZERLAND**

1 Trade in Toxic Substances Law, 1969-03-21

m) **NORWAY**

1. Act No. 4, 1977-02-04, Worker Protection & Environment
2. Decree 1983-11-26, Labelling & Sale Hazardous Chemicals

n) **FINLAND**

1. Decision 383, 1983-04-20, List Poison, Labelling Hazardous Substances
2. Decision 1060, 1983-12-21, Classification / Labelling Carcinogens

Abbreviations used are:

EEC European Economic Communities
IATA International Air Transport Association
ICAO International Civil Aviation Organisation
ADR Accord Dangereux Routiers
RID Reglement International concernant le transport des merchandis Dangereuses
CEFIC European Council, Chemical Manufacturers Federation
OECD Organisation for Economic Co-operation and Development
IMO International Maritime Organisation

o) **COMPANY SPECIFICATIONS**

| **Company** | **Standard** |
|---|---|
| Nissan | Engineering Standard N.E.S. MO0301 [200-N] |
| Ford | WSS–M99P9999–A1 |
| Nedcar | VC04556 |
| Renault | 00-10.050/-C |
| Daimler Chrysler | CS-9003 |
| BMW | SNR817512. /S11389.0 Part 2 |
| Volkswagen A.G. | V.W91101 |
| Delphi | 10949001 |
| General Motors | GMW3059 |
| VDA | 232-101 |

**Appendix 3**
**REACH - SUBSTANCES OF VERY HIGH CONCERN (SVHC)**

# Candidate List of Substances of Very High Concern for Authorization

Link: http://echa.europa.eu/candidate-list-table

(published in accordance with Article 59(10) of the REACH Regulation)

**Notes:**

- **Authentic version:** Only the Candidate List published on this website is deemed authentic. Companies may have immediate legal obligations following the inclusion of a substance in the Candidate List on this website.
- ***EC number, CAS number***: The EC number includes both anhydrous and hydrated forms of a substance and consequently the entries cover both these forms. The CAS number included may be for the anhydrous form only, and therefore the CAS number shown does not always describe the entry accurately.
- ***IUCLID 5 Substance Datasets***: These are partly pre-filled substance data sets in IUCLID 5.3 format. They are provided as a support for importers or producers of articles preparing notifications for substances in articles. The notifying company remains, however, solely responsible for the appropriateness and correctness of the information submitted in the notification.
- ***Reason for Inclusion***: Superscript figures denote information on conditions applicable to the classification of the substance. This information can be accessed through the "Details" button and is available in the sub-menu "Substance Details" in field "Other remarks".