

## ENGINEERING MATERIAL SPECIFICATION

Material Name

Specification Number

### RESTRICTED SUBSTANCE MANAGEMENT STANDARD

WSS-M99P9999-A1

#### 1. SCOPE

The purpose of this Standard 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 in or excluded from parts, materials, equipment, 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 product to Ford to comply with this Restricted Substance Management Standard.

#### 2. APPLICATION

The requirements established by this Standard apply to all products supplied to Ford. They apply equally to Full Service Suppliers, proprietary (black box), and Ford specified items.

This Standard replaces and supersedes specifications SK-M99P9999-A, WSS-M99P9999-A2, WSS-M99P9999-A3, Jaguar Cars JAS.01.01.17, and Volvo Car Corporation Standard 1009,1 ('Black List') and 1009,11 ('Grey List'). When any of those numbers appear on other documents, the requirements of this Standard apply. References to "Ford" within this document shall be understood to include Jaguar Cars, Aston Martin Lagonda, Volvo Car Corporation, the Land Rover Group, and Mazda Motor Corporation.

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

#### 3. REQUIREMENTS

The primary intent of this Standard is to control restricted substances within formed articles. However, it should be noted that non-dimensional materials (e.g., chemicals) and articles which are intrinsically hazardous, or which form or release hazardous substances during use, recycling or disposal, are subject to separate detailed evaluation and clearance by Ford Toxicology. This clearance must be completed prior to supply of product to Ford. Details of any brand-specific direction and this process can be obtained by contacting the appropriate regional Toxicology office (see Appendix 2).

| Date       | Action    | Revisions                                                      |
|------------|-----------|----------------------------------------------------------------|
| 2001 02 15 | Revised   | Revised & updated E. Rezendes                                  |
| 2000 01 24 | Revised   | Rqmts in: 3.2.1; 4; Table 1; and editorial updates E. Rezendes |
| 1984 01 11 | Activated |                                                                |

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Section 3.1 relates to general requirements affecting all product supplied to Ford. Individual restricted substances are alphabetically listed, with the type of restriction indicated, in Table 1, and are also referred to indirectly on a hazardous properties basis in 3.1.5.

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

### 3.1 ALL PRODUCTS

- 3.1.1 Supplier shall disclose, using acceptable material descriptions, all materials used in any product supplied to Ford Motor Company. Reported **material weight must total 100% of part weight**.
- 3.1.2 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 AND SAFETY data/guidance to the requesting Ford Toxicology office. Prior to making any change to the composition or hazard labeling of such products, the supplier shall advise the regional Ford Toxicology office.
- 3.1.3 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.
- 3.1.4 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.
- 3.1.5 Products containing substances which have been identified as having any CARCINOGENIC, MUTAGENIC, REPRODUCTIVE TOXICITY, ECOTOXICITY, or SENSITIZING PROPERTIES (see Definitions, Appendix 1) by testing or human experience, shall not be supplied or submitted without prior notification to and acknowledgment from Ford Motor Company.
- 3.1.6 Paragraph deleted, addressed in para 3.1.5.
- 3.1.7 BIOCIDES (see Definitions, Appendix 1) shall not be supplied or submitted without prior notification to and acknowledgment from Ford Motor Company.

### 3.2 SUBSTANCE RESTRICTIONS

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

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- 3.2.2 Substances designated as "Prohibited" shall not be supplied in any products, subject to the stated directions on content threshold and affected applications.
- 3.2.3 Substances designated as "Restricted" may not be desirable in some applications. Future prohibition is possible. Technically and economically feasible substitutes should be investigated. These substances shall not be supplied in any products without prior notification to, and acknowledgment from Ford Motor Company.
- 3.2.4 Substances designated as "Reportable" are of health, environmental, and/or performance interest and shall not be supplied in any products without prior notification to, and acknowledgment from Ford Motor Company.
- 3.2.5 Certain substances are subject to a specified upper threshold, stated as weight percent content in a material (see Appendix 1). Where no threshold is specified, the substance concerned should not be present in quantities greater than trace levels as established by best industry practice. Thresholds for heavy metals are to be calculated on the basis of the elemental form of the metal.
- 3.2.6 Specific CAS numbers for substances listed in this Standard are available in the current Ford Restricted Substance List, available as a downloadable Excel file on the Ford Supplier Network (FSN) at the following URL: <https://web.tox.ford.com/> and at the website for the International Material Data System (IMDS) as follows: <https://mdsystem.com/>.

#### 4. RESTRICTED SUBSTANCE AND RECYCLED CONTENT REPORTING

Suppliers shall provide, by 30 September 2001, a response to indicate receipt of the Standard, completion of the necessary evaluation and reporting for their products, and certification of compliance for all products supplied to Ford, even if the products contain no listed substances.

Supplier notification of the presence of listed substances and recycled material content shall be submitted to Ford Motor Company for each affected product. Resubmission shall be made only if there are changes in listed substance content, or recycled content (greater than 10% by weight), or changes to the product supplied, which are subject to the Standard.

Suppliers must use the Supplier Restricted Substance and Recycling Information Reporting Form for **Non-Production Materials** (Attachment 1) to submit required information on their products destined for use as Ford **Non-production** materials and to certify compliance to this standard. Substances fully disclosed to Toxicology according to Section 3.0 of this Standard, do not require additional reporting.

Suppliers must use the electronic reporting system to provide the required information on their products destined for use as Ford production materials and to certify compliance to this standard:

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- 4.1 International Material Data System - IMDS  
Suppliers shall access IMDS using the following URL: <https://mdsystem.com/> for full product related material and substance reporting. For training and access registration contact the IMDS-Helpdesk and Service Center: + 49 (0) 421 52 56 333 or: [ims-eds-helpdesk@eds.com/](mailto:ims-eds-helpdesk@eds.com/). Supplier training is available from Electronic Data Systems (EDS). IMDS contact points are listed in Appendix 2. Substances fully disclosed to Toxicology according to Section 3.0 of this Standard, do not require additional reporting.
- 4.2 Restricted Substance Management and Recycling - Part Material Collection data base (RSMR-PMC) will be used exclusively by Ford Motor Company to manage internal restricted substance data and reporting.

### 5. GENERAL INFORMATION

- 5.1 Definitions for technical terms are provided in Appendix 1.
- 5.2 Additional information may be obtained through the activities shown in Appendix 2.

TABLE 1  
SUBSTANCE RESTRICTIONS

| Row Number | Substance                                                    | Type of Restriction (a) | Threshold (not to be exceeded) (b) | Applications affected / Comments                                                                                                                                                                                                                    | Effective date |
|------------|--------------------------------------------------------------|-------------------------|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| 1          | Alkylphenol ethoxylates                                      | Prohibited              |                                    | Detergents and cleaners (including those used for metal and other surface treatment), except those approved by Ford Toxicology prior to 31 January, 2001 for internal use in non-dimensional products (via the procedure described in Section 3.0). | Immediate      |
| 2          | 4-Aminobiphenyl and its salts                                | Prohibited              | 0.1%                               | All Products                                                                                                                                                                                                                                        | Immediate      |
| 3          | Asbestos                                                     | Prohibited              |                                    | All Products                                                                                                                                                                                                                                        | Immediate      |
| 4          | Benzene (free)<br>See Carcinogenic Substances                | Restricted              |                                    | All Products                                                                                                                                                                                                                                        | Immediate      |
| 5          | Benzidine and its salts                                      | Prohibited              | 0.1%                               | All Products                                                                                                                                                                                                                                        | Immediate      |
| 6          | Biocides (See Definitions Appendix)                          | Reportable              |                                    | All Products<br>Triorganotin and organoarsenic biocides are subject to more stringent control (see below)                                                                                                                                           | Immediate      |
| 7          | Organoarsenic compounds                                      | Prohibited              | 0.01%                              | All Products                                                                                                                                                                                                                                        | 31 Jan. 2003   |
| 8          | Trialkyl- and Triaryl tin compounds (triorganotin compounds) | Restricted              | 0.05%                              | All Products                                                                                                                                                                                                                                        | Immediate      |

Notes:

- a) "Prohibited"; "Restricted"; and "Reportable" substances are defined in Appendix 1, "Definitions".
- 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). Where no threshold is specified, the substance concerned should not be present in quantities greater than trace levels as established by best industry practice. Thresholds for heavy metals are to be calculated on the basis of the elemental form of the metal.

TABLE 1 (Cont'd)  
SUBSTANCE RESTRICTIONS

| Row Number | Substance                                                                               | Type of Restriction (a) | Threshold (not to be exceeded) (b) | Applications affected / Comments                                                                                                  | Effective date |
|------------|-----------------------------------------------------------------------------------------|-------------------------|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------|
| 9          | Bis(chloromethyl)ether [BCME]                                                           | Prohibited              |                                    | All products, includes BCME formed from precursors such as formaldehyde and hydrogen chloride                                     | Immediate      |
| 10         | Brominated flame retardants (organic compounds); note separate entry for PBBs and PBDEs | Restricted              |                                    | All products, except electronic components                                                                                        | Immediate      |
|            |                                                                                         | Reportable              |                                    | Electronic components                                                                                                             | Immediate      |
| 11         | Cadmium and its compounds                                                               | Prohibited              |                                    | All products, except Cadmium in batteries for electric vehicles and batteries for facility based equipment                        | Immediate      |
| 12         | Carbon black                                                                            | Restricted              |                                    | Exempt from RSMS reporting requirements when present in "Articles". (see Appendix 1 "Definitions")                                | Immediate      |
| 13         | Carbon disulfide (free)                                                                 | Restricted              |                                    | All Products                                                                                                                      | Immediate      |
| 14         | Carbon tetrachloride                                                                    | Prohibited              |                                    | All Products                                                                                                                      | Immediate      |
| 15         | Carcinogenic substances                                                                 | Restricted              |                                    | All Products                                                                                                                      | Immediate      |
| 16         | Chlorofluorocarbons (CFCs)                                                              | Prohibited              |                                    | All products, includes halocarbon/CFC blends; except where legally permitted. CFCs may only be used to refill facility equipment. | Immediate      |

**Notes:**

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TABLE 1 (Cont'd)  
SUBSTANCE RESTRICTIONS

| Row Number | Substance                                                                                                                                                                                                 | Type of Restriction (a) | Threshold (not to be exceeded) (b) | Applications affected / Comments                                    | Effective date |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|------------------------------------|---------------------------------------------------------------------|----------------|
| 17         | Chlorinated hydrocarbons –see below, and entries for Dichloromethane, Perchloroethene (tetrachloroethylene), Trichloroethene (trichloroethylene) Trichloromethane (chloroform) and Chlorinated paraffins. |                         |                                    |                                                                     |                |
| 18         | Chlorinated hydrocarbons (free)                                                                                                                                                                           | Restricted              |                                    | All Products                                                        | Immediate      |
| 19         | Chlorinated paraffins (chloroalkanes) (defined as: Liquid or solid chlorinated products of paraffins with a chain length of more than 6 carbon atoms and a chlorine content between 15 to 70 %)           | Prohibited              |                                    | Petroleum products, e.g., oils, lubricants and metal working fluids | Immediate      |
|            |                                                                                                                                                                                                           | Prohibited              |                                    | All other products including flame retardants and plasticizers      | 31 Jan. 2003   |
|            |                                                                                                                                                                                                           | Restricted              |                                    | All Products                                                        | Immediate      |

Notes:

- a) "Prohibited"; "Restricted"; and "Reportable" substances are defined in Appendix 1, "Definitions".
- 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). Where no threshold is specified, the substance concerned should not be present in quantities greater than trace levels as established by best industry practice. Thresholds for heavy metals are to be calculated on the basis of the elemental form of the metal.