

Steering Solutions Services Corporation And Affiliates

3900 E. Holland Rd.
SAGINAW, MI 48601-9494

Spec No. 23000000

PRODUCT SPECIFICATION

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NAME OF SPECIFICATION: Spec, Matl, Substances of Concern and Recycled Content

1. **SCOPE**

The purpose of this specification is to define the global restrictions and reporting requirements pertaining to "Substances of Concern" and recycled content that make up the parts and materials sold to Steering Solutions Services Corporation And Affiliates (SSSC). As such, any reference to SSSC within this document pertains also to all of its affiliates globally.

2. **REFERENCED STANDARDS**

- Directive 2000/53/EC of the European Parliament and of the Council on End-of-Life Vehicles (ELV)
- Global Automotive Declarable Substance List (GADSL)
- Latest version of Annex II of the EU ELV Directive 2000/53/EC
- Delphi Corporation test specification DX900359
- Directive 2002/96/EC of the European Parliament and of the Council on Waste Electrical and Electronic Equipment (WEEE)
- Directive 2002/95/EC of the European Parliament and of the Council on the Restriction of the use of certain Hazardous Substances (RoHS) in Electrical and Electronic Equipment
- Registration, Evaluation, Authorization, and restriction of Chemicals (REACH) Regulation 1907/2006

3. **ENVIRONMENTAL AND SAFETY REQUIREMENTS**

The requirements of this specification are in addition to the requirement for submission of a completed Material Safety Data Sheet (MSDS) with any raw material submission or when a new submission is required due to a change in the material composition.

As of 1 June 2007 the REACH (**R**egistration, **E**valuation, **A**uthorization, and **R**estriction of **C**hemicals) regulation entered into force in the European Union. The regulation requires that all substances manufactured or imported into the EU on their own, in preparations and in articles must be registered if certain criteria is met. Additionally, Substances of Very High Concern (SVHCs) require notification and authorization. SSSC will collect SVHC information on articles (parts and raw materials that become part of a saleable product) from suppliers via this specification, the Global Automotive Declarable Substances List, and the International Materials Data System. For more details on REACH, a free download of the Automotive Industry Guideline (AIG) on REACH may be downloaded www.clepa.com.

Other legislation concerning restrictions or reduction of the use of or risk associated with certain hazardous substances in articles still apply separately from REACH (e.g. Directive 2000/53/EC (ELV) and Directive 2002/95/EC (RoHS)).

In addition to information required for compliance to this Standard, a 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 to all TOXICITY, HEALTH, SAFETY, and DANGEROUS GOODS TRANSPORTATION data/guidance to the requesting SSSC Up-front Environmental Engineer or Design Responsible Engineer (DRE). Prior to making any change to the composition or hazard labeling of such products, the supplier shall advise the SSSC Up-front Environmental Engineer or DRE.

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4. MATERIAL PROPERTIES

Not applicable.

5. CONFORMANCE REQUIREMENTS

5.1. APPLICABILITY

This specification applies to all parts and raw materials that become part of a SSSC saleable product. This specification does not pertain to the process chemicals that are used in manufacturing those parts or materials and do not remain in or on the item supplied to SSSC. Reporting must be completed for each purchased SSSC part number.

This requirement also applies to “black-box” parts where the supplier holds design responsibility and to “directed-buy” parts where the customer holds design responsibility for the part or material sold to SSSC.

5.2. REPORTING REQUIREMENT

SSSC has reporting requirements for all direct parts and raw materials. SSSC allows the utilization of IMDS and IPC reporting methods per the additional details below. All data and supporting documentation to comply with the requirements of this specification shall be provided in English.

See Appendix C for flowchart.

5.2.1. REPORTING REQUIREMENTS – Automotive Components/Materials

Automotive components and materials are to be reported using IMDS (SSSC Company ID# 75801). This reporting requires full disclosure to the latest version of the GADSL.

The IMDS Reporting Instruction document referenced in Section 11 provide further information to ensure compliance to SSSC’s reporting requirements

5.2.2. REPORTING REQUIREMENTS – Automotive Electronic Components (<5g)

In order to accommodate electronic component suppliers that also supply to the consumer electronics industry, SSSC is allowing the use of the IPC 1752-1 Materials Declaration Management for some electronic components. This reporting form can be downloaded from www.ipc.org.

Only component parts with a total weight less than 5g can utilize the IPC1752-1 reporting method in place of IMDS. The supplier is to report to Class 3 RoHS Yes/No, JIG Format Substances.

5.2.3. REPORTING REQUIREMENTS – Consumer Electronic Components

Suppliers are to report substances of concern using IPC 1752-1 Class 3 RoHS Yes/No, JIG Format Substances reporting method. The reporting form can be downloaded from www.ipc.org.

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5.2.4. **TIMING**

Proof of acceptable SoC reporting must be provided at time of Production Part Approval Process (PPAP) / Initial Sample Submission or new product introduction for SSSC parts or raw materials that do not utilize the PPAP process. This information may also be requested at prototype for early determinations of compliance.

Where applicable, submission of the Prohibited Substance Approval Form, Appendix A, must be submitted as early as possible in the design process in support of early disclosure and review of the Prohibited Substance and its potential use in SSSC product.

5.2.5. **REPORTING TOOLS**

SoC reporting to SSSC shall be completed using either of the following two (2) tools per the requirements of Section 5.2.1, 5.2.2, and 5.2.3:

Option A: IMDS¹ (Reporting method for all automotive parts and materials)

- Release all completed IMDS data sheets to **SSSC, IMDS company I.D. #75801.**

Option B: IPC² 1752-1 Class 3 RoHS Yes/No, JIG Format Substances (may only be used for electronic parts)

- Send completed forms to the following SSSC mailbox:
Saginaw.Steering.SSSC.SoC@delphi.com

5.2.6. **SoC REPORTING CONFIRMATION**

Upon review of the supplier SoC submission via IMDS or IPC 1752-1 form, SSSC will provide an electronic accept/reject confirmation via e-mail. This confirmation certificate may be needed at PPAP / Initial Sample Submission, or new product introduction (see Section 7 for additional detail).

5.2.7. **MATERIAL AND SUBSTANCE RESTRICTIONS AND DECLARATION –**

Automotive Components/Materials (using IMDS or AIAG reporting)

5.2.7.1. **REPORTING STRUCTURE**

To facilitate ease of reporting and to protect proprietary information, a Flat Bill of Material (Flat BoM) approach is acceptable. A Flat BoM, while providing an abbreviated part tree structure, must still disclose all materials and substances according to section 5.2.7.3 contained within the part or raw material.

5.2.7.2. **MATERIALS**

One hundred percent (100%) of the materials must be identified using either specific or generic material designations. SSSC does not accept information classified as confidential or secret

¹ IMDS - International Material Data System; available at <http://mdsystem.com>

² IPC – Association Connective Electronic Industries; available at <http://www.ipc.org>

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material.

5.2.7.3. **SUBSTANCES**

All substances that make up the specific or generic materials must be disclosed. One hundred percent (100%) of the substances must be accounted for and must always be attached to a material; they may not be attached directly to a component or semi-component. Reporting of the specific substances contained in the material is preferred; however the use of miscellaneous substance categories³ (“wildcard or substance joker” as defined in IMDS Recommendation 001) is acceptable up to 10% by mass in the homogeneous material. The use of pseudo substances and specific CAS#-defined substances is also allowed.

A pseudo-substance⁴ gives an accurate description of the substance or the substance group, but does not have an associated CAS number. Some examples are “acrylic resin” or “cotton fiber”. These substances are accepted as basic substances and are not considered jokers or wildcards, therefore their use is not restricted by the 10% rule.

SSSC requires the declaration of all prohibited and declarable substances as specified in the Global Automotive Declarable Substance List (GADSL⁵, the EU Directive 2000/53/EC of the European Parliament and of the Council on End-of-Life Vehicles (ELV) and supporting amendments⁶, and SSSC 23000000 Appendix B (SSSC-specific Requirements). A content level of 0.1% (weight) shall be used as the reporting threshold unless otherwise specified in the GADSL or SSSC 23000000 Appendix B. Any reportable substance below the declaration level does not need to be reported. Any updates or revisions to the afore-mentioned documents become effective immediately upon publication.

Miscellaneous joker/wildcard or pseudo-substance classifications cannot contain or be used in lieu of any prohibited or declarable substance as defined in the GADSL.

5.2.7.4. **RECYCLED MATERIAL CONTENT**

Reporting of recycled content (post-industrial and post-consumer) is required for polymeric materials only. Recycled content for metallic and other materials is not required at this time.

5.2.8. **MATERIAL AND SUBSTANCE RESTRICTIONS AND DECLARATION** – Automotive Electronic Components (<5g), Consumer Electronics & Medical (using IPC 1752 reporting)

5.2.8.1. **MATERIALS/SUBSTANCES**

SSSC requires the declaration of materials and substances for compliance to Directive 2002/95/EC of the European Parliament and of the Council on the Restriction of the use of certain Hazardous Substances (RoHS) in Electrical and Electronic Equipment and Directive 2002/96/EC of the European Parliament and of the Council on Waste Electrical and Electronic

³ Miscellaneous substance categories are those that have a Chemical Abstract Service number (CAS #) designated as “system” in the IMDS and AIAG ELV Spreadsheet.

⁴ Pseudo-substances are those that have “-” for the CAS number designation in the IMDS and AIAG ELV Spreadsheet.

⁵ The Global Automotive Declarable Substance List may be found at <http://www.gadsl.org/>.

⁶ EU ELV Directive and related documents may be found at http://www.europa.eu.int/comm/environment/waste/elv_index.htm.

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Equipment (WEEE) utilizing the Joint Industry Guide - JIG⁷ 101 Level A and Level B Categories and applicable thresholds. Reporting is to be accomplished using the IPC 1752-1 Material Declaration form.

Lead used in solder is prohibited for automotive electronic components as of Model Year 2009 products. See Appendix B and SSSC part print for additional details and specific requirements.

5.2.9. **PROHIBITED SUBSTANCES**

In addition to the above material and substance disclosures, all Prohibited (P) Substances as defined in the GADSL, the EU Directive 2000/53/EC of the European Parliament and of the Council on End-of-Life Vehicles (ELV) and supporting amendments, and SSSC 23000000 Appendix B must be declared and approved prior to use. Declaration shall be made via completion and submission of the Steering Solutions Services Corporation and Affiliates Prohibited Substance Approval Form, included in Appendix A of this document.

This form is not required for Declarable substances or those substances exempted per EU Directive 2000/53/EC of the European Parliament and of the Council on End-of-Life Vehicles (ELV) and supporting amendments.

Where Prohibited Substances are present, the form must be completed and submitted early in the development cycle. SSSC requires a review of prohibited substances early in order to complete the waiver process or redesign as necessary. Upon review of the submitted Prohibited Substance Reporting Form, SSSC will provide a signed copy back to the submitter, indicating either approval or rejection. This form must be submitted and approved in time for its inclusion in the production part approval submission (PPAP / Initial Sample Submission, initial product introduction).

Prohibited Substances not approved for use by SSSC must be eliminated from the part or material. Approval will only apply to the specific part number as noted on the submission form. Additional approvals will be required for each SSSC part number that contains a Prohibited Substance. Prohibited Substance deviations may be granted on a case-by-case basis, depending on commercial application of the product.

5.2.10. **STEERING SOLUTIONS SERVICES CORPORATION AND AFFILIATES-SPECIFIC REQUIREMENTS**

In addition to the substances and requirements as specified in the GADSL, EU Directive 2000/53/EC of the European Parliament and of the Council on End-of-Life Vehicles (ELV), and Directive 2002/95/EC of the European Parliament and of the Council on the Restriction of the use of certain Hazardous Substances (RoHS) in Electrical and Electronic Equipment and supporting amendments, SSSC may specify other content or reporting requirements. SSSC-specific requirements, when they exist, are included in Appendix B and are subject to all reporting and approval requirements as stated in this document. Substances classified as "D/P" on the GADSL should be considered (P)rohibited for *non-exempt* applications per the EU

⁷ JIG – Joint Industry Guide, Material Composition Declaration for Electronic Products, may be found at <http://www.jedec.org>
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Directive 2000/53/EC of the European Parliament and of the Council on End-of-Life Vehicles (ELV) and supporting amendments, and all others with this classification listed as exempt are (D)eclarable unless otherwise specified in Appendix B of this document.

5.2.11. **PPAP REQUIREMENT**

Proof of acceptable "Substances of Concern" reporting per SSSC 23000000 is a requirement of Production Part Approval Process (PPAP) / Initial Sample Submission, or initial product introduction. See Section 7.0 for required documentation at time of PPAP / Initial Sample Submission, or initial product introduction.

5.2.12. **SoC REPORTING RE-SUBMISSION**

SoC reporting re-submission will be required with any significant change, defined as any of the following:

- The addition of any new prohibited or declarable substance as defined in this document.
- A change in mass of an already reported prohibited or declarable substance as defined in this document equal to or exceeding $\pm 10\%$ of the originally reported value in the homogeneous material, or if the change in mass exceeds a critical legal threshold.
- The addition or deletion of any new material in the product sold to SSSC.
- A change in mass of a material in a single part equal to or exceeding $\pm 10\%$ of the originally reported value.
- A mass change in the assembly sold to SSSC equal to or exceeding $\pm 10\%$ of the originally reported value, or a mass change of more than 50 grams.
- A change in DUNS or supplier code
- A new SSSC P/N is assigned

Prior SoC submissions that do not exceed the "significant change" threshold as described above, may be used for subsequent PPAP submissions.

6. **METHOD OF MANUFACTURE**

Not applicable.

7. **CERTIFICATION OF COMPLIANCE**

Proof of acceptable SoC reporting must be provided as part of the PPAP / Initial Sample Submission, or initial product introduction by inclusion of one of the following documents:

- Option A: The SSSC "Substance of Concern Confirmation of Receipt" letter provided to the supplier via return e-mail at time of IMDS, IPC 1752-1, or AIAG ELV Spreadsheet SoC submission. (Note: This is the only option if submitting SoC data via AIAG ELV Spreadsheet or IPC 1752 form.)
- Option B: An electronic copy of the IMDS Recipient Screen after SSSC acceptance of the data in IMDS.

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- Option C: Notation of the IMDS ID / Version in the comments section of the PPAP / Initial Sample Submission Production Submission Warrant (PSW) after SSSC acceptance of the data in IMDS.

For parts or raw materials being re-submitted for PPAP, previous compliance certification may be used if thresholds in Section 5.2.13 have not been exceeded.

For parts or raw materials being Published in IMDS by suppliers which require PPAP approval by SSSC, the supplier or SSSC PPAP coordinator should submit a request to Saginaw.Steering.SSSC.SoC@delphi.com to receive a "substance of concern confirmation of receipt" (option A) as an acceptable SoC reporting document.

Additionally, if the item contains a Prohibited Substance, the PPAP / Initial Sample Submission, or initial product introduction must also include the pre-approved Prohibited Substance Reporting Form (see Section 5.2.11).

Failure to provide the required SoC documentation may result in a rejection of the PPAP / Initial Sample Submission, or initial product introduction. (See section 5.0 Conformance Requirements).

8. **PACKAGING**
Not applicable.

9. **INSPECTION AND REJECTION:**
Not applicable.

10. **APPROVED SOURCES**
Not applicable.

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11. RELATED STEERING SOLUTIONS SERVICES CORPORATION AND AFFILIATES INFORMATION

Supporting substances of concern reporting documentation and information is posted on the SSSC Covisint Supplier Portal at the following hyperlink and menu path.

Hyperlink: <https://sss.portal.covisint.com>

Menu Path from SSSC Corporation Home Page:

[www.Steering Solutions Services Corporation.com](http://www.SteeringSolutionsServicesCorporation.com)

↳- Suppliers

↳- Public Pages of SSSC Supplier
Community Portal

↳- Materials Specifications / Substances of Concern

Additional Information:

- IMDS FAQ and Recommendations on <http://mdsystem.com> also provide additional useful information and tips

Questions and submission inquiries should be directed to the following E-mail address:

Saginaw.Steering.SSSC.SoC@delphi.com

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Appendix A

Instructions for Completing the Prohibited Substance Reporting Form for Steering Solutions Services Corporation and Affiliates Specification 23000000

The Prohibited Substance Reporting Form shall be completed electronically by using the Microsoft Word Document located on the SSSC Covisint Supplier Portal (see Section 11 of this specification for URL address). Submission of all Prohibited Substance Reporting Forms for SSSC review and approval shall be done electronically by sending the completed form as an attachment to the following SSSC e-mail address Saginaw.Steering.SSSC.SoC@delphi.com

The Prohibited Substance Reporting Form is **not** to be used as a tool for SoC Reporting. It is to be used as a request for deviation to obtain approval to supply parts or materials to SSSC containing a Prohibited Substance as defined in the GADSL or Appendix B. This form is not required for Declarable substances or those substances exempted per EU Directive 2000/53/EC of the European Parliament and of the Council on End-of-Life Vehicles (ELV) and supporting amendments.

The Prohibited Substance Reporting Form must include the reason for using the Prohibited Substance and a plan to eliminate its use. The plan shall include timing and identification of potential replacement substances. The approval will only apply to a specific application as identified by SSSC part number and/or product line and vehicle application and will be specified on the approval form in the "Approval Restrictions" section by the approver.

For parts with a material that contains a Prohibited Substance, the percentage of the Prohibited Substance is reported as the mass percent of the substance in the homogeneous material contained in the part.

For raw materials that contain a Prohibited Substance, the percentage of the Prohibited Substance is reported as the mass percent of the substance in the homogeneous raw material.

In the context of this specification, "material" is defined as the primary medium containing the substance of concern, and "substance" is defined as the basic chemical or chemical compound listed in the GADSL as a "Prohibited Substance" (*ex. In electrical wiring, polyvinylchloride (PVC) used for the wire insulation is the "material" containing the "substance" lead salt*). The supplier must detail all parts and raw materials that contain Prohibited Substances.

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APPENDIX A – Form: Prohibited Substance Approval Form for Steering Solutions Services Corporation and Affiliates Specification 23000000
e-mail completed form to: Saginaw.Steering.SSSC.SoC@delphi.com

Information regarding the ITEM sold to SSSC (assembly, sub-assembly, part or material)		Manufacturer / Supplier Information	
Item Name: _____		Company Name: _____	Manufacturing Address: _____
Item Part Number: _____	_____	Contact Name: _____	Phone: _____
Revision Level: _____	Item Unit of Measure: _____	Email: _____	Fax: _____
Revision Date: _____	Total Mass (g): _____	Mail Code: _____	Supplier Mfg Site DUNS #: _____

A	B	C	D	E	F	G	H
Item or Part Name Containing the Prohibited Substance	Part Number of Item in Column "A"	Mass (g) of Item in Column "A"	Name of Material in Item "A" that contains the "Prohibited Substance"	Mass (g) of Material in Column "D"	Name of "Prohibited Substance" Contained in Material listed in Column "D"	CAS# of "Prohibited Substance" in Column "F"	Mass (%) of "Prohibited Substance" in Column "G"

Reason for Using the Above Prohibited Substances: _____

Action Plan to Eliminate Prohibited Substance(s): _____
 (including suggested replacement and timing)

Supplier Certification:

Signature (optional): _____

Printed Name: _____

Title: _____

Phone: _____

Fax: _____

E-Mail: _____

Date: _____

SSSC Review and Approval Information:

Signature: _____

Printed Name: _____

Title: _____

Phone: _____

Fax: _____

E-Mail: _____

Date: _____

Approved Not Approved

Approval Restrictions:

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APPENDIX B: Steering Solutions Services Corporation and Affiliates-Specific SoC Requirements

Due to customer or other requirements that differ from the Global Automotive Declarable Substance List, SSSC has implemented the additional requirements for SoC content and reporting as detailed below in Table 1.

Additional Substance / Material Restrictions

<u>Requirement Designation</u>	<u>Substance</u>	<u>CAS #</u>	<u>Type of Restriction (P) or (D)</u>	<u>Application(s)</u>	<u>Applicable Threshold</u>	<u>Effective Date</u>	<u>See Note</u>
B-1	Lead	7439-92-1	(P)rohibited	Solder and pre-solder finishes/plating	0.1% wt/wt	May 2009	
B-2	Triorganotin Compounds	Various	(P)rohibited	Biocide	0.01% wt/wt	Jan 2006	1
B-3	Decabromo diphenyloxyde	1163-19-5	(P)rohibited	Flame retardant	0.1% wt/wt	July 1, 2010	2
B-4	Formaldehyde	50-00-0	(P)rohibited	Interior part	>10ppm=0.001%	Jan 2009	3
B-5	Chromium (VI) Salts	Various	(P)rohibited	Corrosion preventative coatings	0.1% wt/wt 0.01 µg/cm ² (test per DX900359)	Oct 2004	

Notes:

1. Prohibited per Ford WSS-M99P9999-A1, 2006.
2. Prohibited per Ford WSS-M99P9999-A1, 2008.
3. GMW3059 Restricted and Reportable Substances for Parts per GM, 2007.

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APPENDIX C – SSSC 2300000 Reporting Flowchart



