
MATERIAL SPECIFICATION
Material Reporting, Substances of Concern and Recycled Content**1. SCOPE**

The purpose of this specification is to define the global restrictions and requirements pertaining to material reporting, Substances of Concern (SoC) and recycled content that make up the parts and materials sold to Aptiv.

Note: Aptiv and Delphi Technologies are separate companies and their 10949001 Specification and requirements are therefore distinct. Aptiv 10949001 replaces Delphi 10949001 and is to be used when design documents reference Delphi 10949001.

2. REFERENCED STANDARDS AND LEGISLATION

- Directive 2000/53/EC of the European Parliament and of the Council on End-of-Life Vehicles (ELV) to latest version, Annex II, and supporting amendments. http://ec.europa.eu/environment/waste/elv_index.htm
- Global Automotive Declarable Substance List (GADSL). <http://www.gadsl.org>
- Directive 2002/96/EC of the European Parliament and of the Council on Waste Electrical and Electronic Equipment (WEEE) and supporting amendments
- General Products Safety Directive 2001/95/EEC
- Directive 2011/65/EU 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. http://ec.europa.eu/environment/waste/rohs_eee/index_en.htm
- Registration, Evaluation, Authorisation, and Restriction of Chemicals (REACH) Regulation. EC No.1907/2006 and supporting amendments. <http://echa.europa.eu/>
- IEC 62474 - Material Declaration for Products of and for the Electrotechnical Industry. <http://std.iec.ch/iec62474>
- IPC-1752A Materials Declaration Management Standard and IPC 1754 Materials and Substances Declaration for Aerospace, Defense, HE and Other Industries <http://www.ipc.org/>
- GB/T30512-2014 Substance restriction.
- Biocidal Product Regulation (BPR) Regulation (EU) 528/2012
- California Proposition 65 Safe Drinking Water and Toxic Enforcement Act of 1986
- Aptiv Environmental, Health and Safety Policy <https://www.aptiv.com/legal-compliance/policies>
- Global List of Automotive Process Substances (GLAPS) <http://www.acea.be/industry-topics/tag/category/glaps>
- Korea Act for Resource Recycling of Electrical and Electronic Equipment and Vehicles (Korean RoHS/ELV)

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 or SDS) with any substance or preparation submission or when a new submission is required due to a change in the material composition.

In the event of a regulated chemical sunset date (Annex XIV REACH Regulation 1907/2006) or restriction (Annex XVII REACH Regulation 1907/2006) suppliers will be required to show IMDS compliance with said requirements at least six (6) months prior to a sunset or restriction date. Specifically, no IMDS records will be accepted within a 6-month period leading to a formal sunset date that shows the presence of a regulated substance of concern (SoC) unless that component, semi-component or material is for a region without such a restriction **and** is acceptable for use to the end use customer.

Aptiv material suppliers in or to the European Union must meet the REACH Regulation 1907/2006 substance registration requirements.

For more details on REACH and its obligations, a free download of the Automotive Industry Guideline (AIG) on REACH is available at the European Automobile Manufacturers Association (ACEA) web site at: <http://www.acea.be/publications/article/reach-automotive-industry-guideline>

Other legislation concerning restrictions, reducing the use of or the risks from hazardous substances in articles still apply separately from REACH. Examples are the General Products Safety Directive 2001/95/EEC and product specific legislation such as the Biocidal Product Regulation (BPR) Regulation (EU) 528/2012, Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS), or Directive 2000/53/EC on End of Life Vehicles (ELV).

In addition to information required for compliance to this specification, a supplier, upon request from the Aptiv Design for the Environment, Health and Safety Engineer (DfEHS), Product Engineer, Design Responsible Engineer (DRE) or Material Engineer, shall provide the composition (chemical identity of each constituent and its proportion by weight) of products or materials supplied or proposed to be supplied and all BIOCIDAL, TOXICITY, HEALTH, SAFETY and DANGEROUS GOODS TRANSPORTATION data/guidance. . Prior to making any change to the composition or hazard labeling of such products or materials, the supplier shall advise and consult with those Engineers.

4. CONFORMANCE REQUIREMENTS

4.1. APPLICABILITY

This specification applies to all parts and raw materials that become part of Aptiv saleable product. Reporting must be completed for **each Aptiv 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 Aptiv (IMDS or alternative material reporting is required).

4.2. MATERIAL REPORTING REQUIREMENT

Aptiv requires suppliers to submit material information (including declaration of any SoC as well as any Substances of Very High Concern (SVHCs) on the REACH candidate,

authorization or restricted substance list) using the Global Automotive Declarable Substances List (GADSL) and the International Materials Data System (IMDS at <http://www.mdsystem.com>).

Material and SoC reporting per the Global List of Automotive Process Substances (GLAPS) may be required.

For non-automotive components and materials (consumer electronics, medical, military and aerospace, etc.), an alternative to material reporting in IMDS is to use IEC 62474, or IPC-1752A (or similar material/substance disclosure document). Less preferably, non-automotive suppliers may use a certificate of compliance / declaration letter (compliance to EU RoHS Directive 2011/65/EU, declaration of the absence or presence of SVHCs per EU REACH 1907/2006, etc.) in lieu of or in addition to IEC 62474 or IPC-1752A (or similar material/substance disclosure document).

Aptiv's primary IMDS Organization ID is **954**.

However, based on mergers and acquisitions, there are additional IMDS Org IDs that have been established and / or transferred under Aptiv:

Organization	IMDS ID
Aptiv	954
Aptiv Austria GmbH	4448
Aptiv Automotive France	15008
Aptiv Automotive Nantong Ltd	45851
Aptiv Automotive – North America	5710
Aptiv Brasil Ltda	17880
Aptiv Deutschland GmbH	868
Aptiv Hungary KFT	2770
Aptiv India Limited	33399
Aptiv Italia S. p. A.	6518
Aptiv japan automotive div.	27457
Aptiv Korea Co. LTD	18662
Aptiv Shanghai Ltd.	72912
Aptiv Data Connectivity (ADC) <i>(formally Unwired Technology LLC)</i>	1576

Please note, if multiple organizations are affected, multiple submissions are required.

All data and supporting documentation to comply with the requirements of this specification shall be provided in English.

If the same Aptiv part number is shipped from different sites by the same supplier, an IMDS submission for each site is required, declaring the DUNS number (Dun & Bradstreet number, <http://www.dnb.com/duns-number/lookup.html>) of each site in the Supplier Code field of the IMDS Recipient data tab. A copy-copy submission is acceptable (same part number, different IMDS ID).

Additional Aptiv reporting criteria can be downloaded per the instructions in section 7 below:

- “IMDS Rejection Reasons” detail the most frequent errors resulting in rejection of supplier IMDS submittals;
- “10949001 IMDS Reporting Instructions” provide basic guidance for IMDS registration, structure and submission.

See Appendix A for flowchart.

For non-automotive components, suppliers are permitted to report material and substances of concern using IEC 62474 or IPC 1752A (or similar material/substance disclosure document). Full material disclosure is preferred. Reporting against IEC 62474 Declarable Substance groups and declarable substances, including REACH and RoHS declarations, is acceptable. IEC 62474 provides an XML schema. Free IPC 1752A generators are available via internet search. Less preferably, non-automotive suppliers may use a certificate of compliance / declaration letter (compliance to EU RoHS Directive 2011/65/EU, declaration of the absence or presence of SVHCs per EU REACH 1907/2006, etc.) in lieu of or in addition to IEC 62474 or IPC-1752A (or similar material/substance disclosure document).

4.2.1. **TIMING**

Aptiv requires material reporting for products and materials to support customer reporting requirements (that are increasingly moving earlier and earlier in the design process) and to qualify new or revised materials and products.

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

Prohibited substances (as defined in Section 4.2.7) must be declared to Aptiv as early as possible in the design process.

4.2.2. **REPORTING STRUCTURE**

To facilitate ease of reporting and to protect proprietary information, a Flat Bill of Material (Flat BoM) approach per IMDS Recommendation 019 is acceptable. A Flat BoM, while providing an abbreviated part tree structure, must still disclose all materials and substances according to paragraph 4.2.4 and 4.2.5, contained within the part or raw material.

4.2.3. **MATERIALS**

One hundred percent (100%) of the materials must be identified using either specific or generic material designations.

4.2.4. **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. Reporting of the specific substances contained in the material is preferred; however, the use of miscellaneous substance categories (“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 are preferred.

A pseudo-substance (as defined in IMDS Recommendation 001) 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.

Aptiv requires the declaration of all prohibited and declarable substances as specified in the Global Automotive Declarable Substance List (GADSL). A declaration level of 0.1g/100g (0.1% weight) non-separable, homogeneous material shall be used as the reporting threshold unless otherwise specified in the GADSL or end use customer (such specific requirements will be communicated to the supplier either by that customer or via Aptiv). Any reportable substance below the declaration level does not need to be reported. Any updates or revisions to the above-mentioned documents become effective immediately upon publication. In pertaining to REACH and complex products composed of multiple sub-articles, Aptiv requires suppliers to follow the “once and article always an article” (O5A) ruling of the Court of Justice of the European Union (<https://curia.europa.eu/jcms/upload/docs/application/pdf/2015-09/cp150100en.pdf>).

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.

4.2.5. **RECYCLED MATERIAL CONTENT.**

Reporting in IMDS 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.

4.2.6. **PROHIBITED SUBSTANCES**

In addition to the above material and substance disclosures, when requested by Aptiv for a specific product, Declarable (D) and / or Prohibited (P) Substances above the threshold as defined in the GADSL or customer specific requirements, and any substance prohibited by legislation but not yet added to GADSL, must be declared to Aptiv using the “Prohibited Substance Approval Form for Aptiv Specification 10949001” (download per the instructions in section 7 below). These substances can only be used once the signed authorization form granting approval is issued by Aptiv.

Substances not approved for use by Aptiv must be eliminated from the part or material. Approval will only apply to the specific application and a specific Aptiv business segment. Additional approvals will be required for each Aptiv business segment and application that uses parts or raw materials that contain the substance (s). Substance deviations may be granted on a case-by-case basis, depending on commercial application of the product.

4.2.7. **APTIV’S CUSTOMER SPECIFIC REQUIREMENTS**

In addition to the substances and requirements as specified in the GADSL and the referenced legislation (see section 2 REFERENCED STANDARDS AND LEGISLATION), Aptiv may specify other content or reporting requirements, according to

Aptiv's customer specific requirements. Individual OEM customers may restrict additional chemicals or compounds over and above what is listed in the GADSL. It is the responsibility of the affected product group to manage this issue.

4.2.8. **Material and SoC REPORTING RE-SUBMISSION**

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

- In IMDS: as required by IMDS 001 General Rules and Guidelines
- 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 Aptiv.
- 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 Aptiv 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 Aptiv P/N is assigned.
- Even for already approved material and SoC reports, Aptiv will request a resubmission of an updated version of the data sheet if needed due to other external reasons such as changes in regulations, vehicle type approval timelines, change in customer requirements, etcetera.
- When there is a change to the GADSL, all MDSs that have a joker/wildcard in their tree structure must be reviewed to determine whether the substance that the joker/wildcard replaces is now declarable or prohibited. All substances marked as confidential must undergo the same review to identify if any confidential substance is now declarable or prohibited. Should that be the case, a revised submission with a full non-confidential disclosure of the declarable or prohibited substance is required by the date in the legislation. If no date is given or the date is longer than 6 months, the resubmission must occur no later than 6 months from the publication date of the updated GADSL.

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

5. **CERTIFICATION OF COMPLIANCE**

Proof of acceptable material and 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 as required by the particular Aptiv procuring business segment:

- **Option A Advanced Safety and User Experience:** An electronic copy of the IMDS Recipient Screen **after** Aptiv acceptance of the data in IMDS may be required.
- **Option B Signal and Power Solutions (Electrical Distribution Systems and Engineered Component Group):** Notation of the IMDS ID / Version in the comments section of the PPAP / Initial Sample Submission Production Submission Warrant (PSW) **after** Aptiv 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 4.2.9 have not been exceeded.

Failure to provide the required material and SoC reporting documentation may result in a **rejection of the PPAP** / Initial Sample Submission, or initial product introduction. (See section 4 Conformance Requirements).

6. PACKAGING

Packaging is not reported in the IMDS. However, under REACH it is considered an article. Suppliers must communicate the presence of any SVHC in their product packaging sent to Aptiv to their Aptiv packaging contact and to the applicable Aptiv business segment e-mail address in section 7 below.

7. RELATED APTIV INFORMATION

Supporting material and SoC reporting documentation and information is posted on the Aptiv Covisint Supplier Portal at the following hyperlink and menu path.

Hyperlink: [Aptiv 10949001 Specification Related Documents](#)

Menu Path from Aptiv Corporation Home Page:

<http://www.Aptiv.com>

↳ Suppliers

↳ Current Suppliers

↳ Aptiv Customer Specific Requirements

↳ Materials Specifications / Substances of Concern

- Prohibited Substance Approval Form for Aptiv Specification 10949001
- Aptiv 10949001 IMDS Reporting Instructions
- IMDS Rejection Reasons

Additional Information:

- "New at IMDS?" on <http://www.mdssystem.com> also provide additional useful information and tips

Questions and submission inquiries should be directed to either of the following:

- Advanced Safety and User Experience:
IMDS requests: SoC.AS&UE@aptiv.com
REACH requests: reach.request@aptiv.com
- Signal and Power Solutions:
Engineered Components Group: imds.request@aptiv.com
Electrical Distribution Systems: imds.eds@aptiv.com

APPENDIX A – Aptiv 10949001 Reporting Flowchart

