

MATERIAL SPECIFICATION

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” (SoC) and recycled content that make up the parts and materials sold to BWIGroup.

2. **REFERENCED STANDARDS**

- 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 such as but not limited to:
 - o 2011/37/UE amending Annex II to Directive 2000/53/EC
- Global Automotive Declarable Substance List (GADSL)
- Directive 2002/96/EC of the European Parliament and of the Council on Waste Electrical and Electronic Equipment (WEEE) and supporting amendments.
- 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.
- Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) Regulation. EC No.1907/2006 and supporting amendments.
- ECHA Candidate List of Substances of Very High Concern for Authorization
- Chinese Automotive Material Data System (CAMDS)

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.

As of 1 June 2007 the REACH regulation entered into force in the European Union/European Economic Area. The regulation requires that all substances manufactured or imported into the EU/EEA on their own, in preparations¹ and in articles² must be registered if certain criteria are met. Additionally, the ECHA Substances of Very High Concern (SVHC) from the candidate list require communication, notification and authorization under certain circumstances. BWI Group requires suppliers to submit information about SVHCs on the candidate list if they are present in articles (parts and raw materials that become part of a saleable product) using the Global Automotive Declarable Substances List (GADSL³) and the International Materials Data System (IMDS⁴). For more details on REACH and its obligations, a free download of the Automotive Industry Guideline (AIG) on REACH is available at www.clepa.com.

Other legislation concerning restrictions and 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

¹ Preparation means “a mixture or solution composed of two or more substances” (Article 3.2 REACH Directive).

² Article means “an object which during production is given a special shape, surface or design which determines its function to a greater degree than does its chemical composition” (Article 3.3 of the REACH legislation). ‘Articles’ include parts and materials that become part of a saleable product. Also reference European Chemicals Agency (ECHA) Guidance on requirements for substances in Articles at <http://echa.europa.eu/>

³ <http://www.gadsl.org/>

⁴ www.mdsystem.com

Directive 2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS⁵), or Directive 2000/53/EC on End of Life Vehicles⁶.

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 and all TOXICITY, HEALTH, SAFETY and DANGEROUS GOODS TRANSPORTATION data/guidance to the requesting BWIGroup Design Responsible Engineer (DRE). Prior to making any change to the composition or hazard labeling of such products, the supplier shall advise the BWIGroup Design Responsible Engineer (DRE).

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 BWIGroup saleable product. This specification does not apply to the process chemicals that are used in manufacturing parts or materials that do not remain in or on the item supplied to BWIGroup. Reporting must be completed for each BWIGroup 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 BWIGroup.

5.2. **REPORTING REQUIREMENT**

BWIGroup has reporting requirements for all direct parts and raw materials. BWIGroup allows the utilization of **IMDS** (preferred) **and CAMDS** (for use where required by customers). BWIGroup IMDS Company ID is **93726**. BWIGroup **CAMDS** Company ID is **CA_3_4751**. All data and supporting documentation to comply with the requirements of this specification shall be provided in English. This reporting requires full disclosure to the latest version of the GADSL. The IMDS Reporting Instruction documents referenced in Section 11 provide further information to ensure compliance to BWIGroup's reporting requirements.

See Appendix B for flowchart.

5.2.1. **TIMING**

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

⁵ http://ec.europa.eu/environment/waste/weee/legis_en.htm

⁶ http://ec.europa.eu/environment/waste/elv_index.htm

5.2.2. **REPORTING TOOLS**

SoC reporting to BWIGroup shall be completed using the following tools:

IMDS Release all completed IMDS data sheets to **BWIGroup BeijingWest Industries Corporation, Beijing China, IMDS parent code #93726.**
CAMDS **Beijing West Industries (Shanghai) Co. Ltd, CAMDS parent code # CA_3_4751**

5.2.3. **SoC REPORTING CONFIRMATION**

Upon review of the supplier SoC submission via IMDS/CAMDS, BWIGroup will provide electronic information directly into IMDS / CAMDS when report is accepted /or rejected. Then additionally BWIGroup will send a message to supplier with details / reasons of rejection. The supplier will need this information for use in the PPAP / Initial Sample Submission, or new product introduction (see Section 7 for additional detail).

5.2.4. **REPORTING STRUCTURE**

To facilitate ease of reporting and to protect proprietary information, a Flat Bill of Material (Flat BoM) approach per IMDS Recommendations is acceptable. A Flat BoM, while providing an abbreviated part tree structure, must still disclose all materials and substances contained within the part or raw material according to paragraphs 5.2.5 and 5.2.6.

5.2.5. **MATERIALS**

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

5.2.6. **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 categories⁷ (“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-substance⁸ 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.

BWIGroup requires the declaration of all prohibited and declarable substances as specified in the Global Automotive Declarable Substance List (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 BWIGroup 10949001 Appendix B (BWIGroup-specific requirements). 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 BWIGroup 10949001 Appendix A. Any reportable substance below the declaration level does not need to be reported. Any updates or revisions to the aforementioned documents become effective immediately upon publication.

Substances that are not declarable or prohibited according to GADSL (suppliers to Renault: BGO list), that are not an SVHC, and that do not require an application code may sometimes be labeled *highly confidential* to a supplier.

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.

⁷ Miscellaneous substance categories are those that have a Chemical Abstract Service number (CAS #) designated as “system” in the IMDS.

⁸ Pseudo-substances are those that have “-” for the CAS number designation in the IMDS.

5.2.7. **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.

5.2.8. **BWIGroup-SPECIFIC REQUIREMENTS**

In addition to the substances and requirements as specified in the GADSL, EU Directive of the European Parliament and of the Council on End-of-Life Vehicles (ELV), and Directive 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, BWIGroup may specify other content or reporting requirements. BWIGroup-specific requirements, when they exist, are included in Appendix A 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 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 A of this document.

5.2.9. **PPAP REQUIREMENT**

“Substances of Concern” reporting per BWIGroup 10949001 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.

5.2.10. **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 BWIGroup.
- 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 BWIGroup 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 BWIGroup 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 including one of the following documents:

- Suppliers could obtain automatic email message from MDS with information about approval/reject of IMDS report.
- MDS Report obtained directly from the IMDS system (<http://mdsystem.com>) for each part number submitted which also shows approval/rejection status.

For parts or raw materials being re-submitted for PPAP, previous proof of acceptance (see above) may be used if thresholds in Section 5.2.10 have not been exceeded.

For parts or raw materials Published in IMDS by suppliers which require PPAP approval by BWIGroup, the BWIGroup PPAP coordinator should contact BWIGroup TCK at imds@bwigroup.com to receive an acceptable SoC reporting document.

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. Packaging is not reported in the IMDS but under REACH it is considered an article and communication may be required.

9. **INSPECTION AND REJECTION:**

Not applicable.

10. **APPROVED SOURCES**

Not applicable.

11. **RELATED BWIGroup INFORMATION**

Supporting substances of concern reporting documentation and information can be obtained through your BWIGroup Buyer.

Additional Information:

- IMDS FAQ and Recommendations on <http://mdsystem.com> also provide additional useful information and tips
- After logging into the IMDS system, the Recommendations provide additional detailed examples for reporting materials and product

Questions and submission inquiries should be directed to BWIGroup SoC at TCK:

- E-mail address: imds@bwigroup.com

12. **REVISION RECORD:**

Reference Revision Code	BWIGroup Authority	Date	Originated By	Description
A,001,1		23DE99	Clemente Marquez	Release
B,00 2,2		16FE00	Clemente Marquez	Incorporated clarifications.
C,003,3		12MY03	MTG and DfE Teams	Complete re-write of spec. Revised substance list. Revised declaration form and associated descriptors.
D,004,3		14JL03	MTG and DfE Teams	Updated Appendix B Divisional Mailboxes
E,005,4		27MY04	SoC TT and MTG	Re-write with new requirements to IMDS STD101 ILRS, new reporting instructions and FAQs
F, 006		8SEP05	SoC TT and MTG	Update ILRS to GADSL; WEEE/RoHS reference; added B-2 and B-3 to Appendix B
G, 007		31Oct06	SoC TT and MTG	Update to include IPC1752-1 for electronics
H,008		15DEC08	SoC TT	Update to include Annex II version 2008/689/EC, REACH; update Timing, Reporting tools, Certification of compliance, Appendix B adding B-3, B-4 and deleting chromium VI.
I, 009		21MY09	SoC TT	Update to include Chromium VI test method in Appendix B
010	CR 108100435	07JA10	John Clifford	Converted to BWIGroup from Delphi and removed sections on Consumer Electronic and Medical Components (no longer apply for BWI).
011	CR200001471 CR200001465	05OC12 10OC12	John Clifford	Changed IMDS reporting locations from Delphi MTC to BWI TCK. Removed references to IPC1752-1 for reporting electronics. Removed option to use Prohibited Substances. Deleted lead, chromium VI, formaldehyde from Appendix A since all are included in other referenced documents.
012	CR200001471, 002 CR200001465, 002	16JN16 30JN16	John Clifford	Amended Appendix A to include Persistent Organic Pollutants noted in GADSL and GMW3059 revision dated April 4, 2016



APPENDIX A:
BWIGroup-Specific SoC Requirements

Due to customer or other requirements that differ from the Global Automotive Declarable Substance List, BWIGroup has implemented the additional requirements for SoC content and reporting as detailed below in Tables 1 & 2.

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	Triorganotin Compounds	Various	(P)rohibited	Biocide	0.01% wt/wt	Jan 2006	1
B-2	Decabromo diphenyloxide	1163-19-5	(P)rohibited	Flame retardant	0.1% wt/wt	July 1, 2010	2

Table 2

All the materials below are considered Persistent Organic Pollutants (POPs) and are Prohibited above the stated thresholds as of 4/1/2016. See Note 3.

<u>Substance</u>	<u>CAS</u>	<u>Threshold (% w/w)</u>
Decabromodiphenyl ether (Deca BDE)	1163-19-5	0
PFOA, Perfluorooctanoic acids C ₈ F ₁₅ O ₂ H, its salts, esters, higher homologues and precursors, all members	335-67-1	0
Ammonium salt of PFOA	3825-26-1	
Potassium salt of PFOA	2395-00-8	
Silver salt of PFOA	335-93-3	
Sodium salt of PFOA	335-95-5	
Alkanes C10-C13, chloro (short-chain chlorinated paraffins) (SCCPs)	85535-84-8	0.15
Hexabromocyclododecanes	25637-99-4	0.01
	3194-55-6	
	134237-50-6	
	134237-51-7	
	134237-52-8	
Hexachlorocyclohexanes	319-84-6	0
	319-85-7	
Hexachlorobenzene	118-74-1	0

Notes:

1. Prohibited per Ford WSS-M99P9999-A1, 2006.
2. Prohibited per Ford WSS-M99P9999-A1, 2008.
3. Prohibited per GMW3059, 2016. Also listed in GADSL.

APPENDIX B – BWIGroup 10949001 Reporting Flowchart

