



Product Engineering

PRODUCT CHEMICAL AND MATERIAL REGULATORY COMPLIANCE REQUIREMENTS

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Procedure Standard

PR-CH

Date: 2022-11-17
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RATIONALE:

- This standard specifies the internal Doosan Bobcat product requirements for providing declarations of substances, mixtures, and substances within articles as required by regional regulations or by customer requests.

1. Purpose

This standard summarizes the supplier obligations to provide the information and supporting documentation regarding the components and materials provided to Doosan Bobcat to assist in meeting all applicable product chemical and material related laws, directives, regulations, and standards in all globally marketed regions.

2. Scope

This standard applies to the supply chain and manufacturing processes of all entities within the global Doosan Bobcat portfolio. All raw materials, components, and sub-assemblies provided to Doosan Bobcat, both production and aftermarket, will be subject to the regional market requirements as defined within this standard. Applicable regulations and directives are as follows:

- EU REACH Regulation
EU Waste Framework Directive (WFD) (SCIP)
EU RoHS Directive
EU Biocides Regulation
U.S. Toxic Substances Control Act (TSCA)
U.S. Conflict Minerals
California Proposition 65
Doosan Bobcat Specific Requirements

3. References

- IPC 1752: Materials Declaration Management Standard
IPC 1754: Materials and substances declaration for aerospace and defense and other industries
ISO 9001: Quality management systems — Requirements
ISO 14001: Environmental management systems — Requirements with guidance for use

4. Definitions

- Article: 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
DSL / RSL: Declarable / Restricted Substance List
ECHA: European Chemicals Agency



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EEE	Electrical and electronic equipment
Exemption	Allowance for the use of regulated declarable substances or declarable substance groups above their threshold(s) as defined in laws or regulations
FMD	Full Material Disclosure
Manufacturer	Any natural or legal person established within the Community who manufactures a substance within the Community
Material	Substance or mixture of substances within a product or product component
Material Declaration	Declaration of certain substances or substance groups contained within a product, product component, or material as applicable
PPAP	Production Part Approval Process
Producer	Any natural or legal person who makes or assembles an article within the Community
RMAP	Responsible Minerals Assurance Process
SCIP	Substances of Concern in articles as such or in complex objects (Products)
Substance	A chemical element and its compounds in the natural state or obtained by any manufacturing process, including any additive necessary to preserve its stability and any impurity deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition
SVHC	Substance of Very High Concern
WFD	Waste Framework Directive



5. Background

5.1 EU REACH

REACH aims to improve the protection of human health and the environment through the better and earlier identification of the intrinsic properties of chemical substances. This is done by the four processes of REACH, namely the registration, evaluation, authorization, and restriction of chemicals. REACH also aims to enhance innovation and competitiveness of the EU chemicals industry.

"No data, no market": the REACH Regulation places responsibility on industry to manage the risks from chemicals and to provide safety information on the substances. Manufacturers and importers are required to gather information on the properties of their chemical substances, which will allow their safe handling, and to register the information in a central database in the European Chemicals Agency (ECHA) in Helsinki. The Agency is the central point in the REACH system: it manages the databases necessary to operate the system, co-ordinates the in-depth evaluation of suspicious chemicals and is building up a public database in which consumers and professionals can find hazard information.

The Regulation also calls for the progressive substitution of the most dangerous chemicals (referred to as SVHC) when suitable alternatives have been identified.

Table 1

Reference Number	EC 1907/2006
RSL / DSL	Annex XIV; Annex XVII; SVHC List
Exemptions	Annex IV and V for registration obligations
Applicable Regions	European Union
Declaration Format	Current IUCLID Format

5.2 EU Waste Framework Directive (WFD)

As part of the implementation of the EU's action plan for the circular economy adopted in 2015, the revised Waste Framework Directive entered into force in July 2018. It gave ECHA the task to develop a database with information on articles containing substances of very high concern (SVHCs) on the Candidate List. New substances are regularly added to the Candidate List under REACH.

Companies that produce, import or supply articles containing Candidate List substances have to submit information on these articles placed on EU market to the "Substances of Concern In articles as such or in complex objects" (SCIP) database, starting 5 January 2021. These articles can be produced in the EU or imported from non-EU countries.

The information in the database may help waste operators in sorting and recycling articles that contain Candidate List substances, and support consumers in making informed choices and considering how to best use and dispose of such articles. Overall, the database should contribute to the progressive substitution of SVHCs in articles and to the development of safer alternatives. The SCIP database complements the existing communication and notification obligations for Candidate List substances in articles under REACH.

Table 2

Reference Number	2008/98/EC
Database Location	SCIP Database
Requirements	Suppliers of Articles ; SCIP Notifications ; Detailed Information Requirements
Applicable Regions	European Union
Declaration Format	Current IUCLID Format



5.3 EU RoHS Directive

The rise in the production and use of electrical and electronic products, such as mobile phones, computers, and kitchen appliances, has resulted in an increasing volume of electrical and electronic waste. During the use, collection, treatment and disposal of such waste, products may release harmful (hazardous) substances such as lead, mercury, and cadmium, which can cause major environmental and health problems.

The RoHS Directive aims to prevent the risks posed to human health and the environment related to the management of electronic and electrical waste. It does this by restricting the use of certain hazardous substances in EEE that can be substituted by safer alternatives. These restricted substances include heavy metals, flame retardants or plasticizers.

Table 3

Reference Number	2011/65/EU
RSL / DSL	RoHS RSL
Exemptions	Category Exemptions ; Annex III; Annex IV
Applicable Regions	European Union
Declaration Format	Annex VI



5.4 EU Biocides

The Biocidal Products Regulation (BPR, Regulation (EU) 528/2012) concerns the placing on the market and use of biocidal products, which are used to protect humans, animals, materials, or articles against harmful organisms like pests or bacteria, by the action of the active substances contained in the biocidal product. This regulation aims to improve the functioning of the biocidal products market in the EU, while ensuring a high level of protection for humans and the environment.

Table 4

Reference Number	EU/528/2012
RSL / DSL	Article 95(1); Approved Active Substances List
Exemptions	None Applicable
Applicable Regions/Countries	European Union
Declaration Format	Current IUCLID Format



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- 5.5 U.S. Toxic Substances Control Act
 The Toxic Substances Control Act of 1976 (TSCA) provides EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, radon, and lead-based paint.

Table 5

Reference Number	15 U.S.C. §2601 et seq. (1976)
RSL / DSL	PBT Substances Risk Evaluation Substances TSCA Inventory Risk Prioritization Substances - Low Priority
Exemptions	TSCA Section 2605(g)
Applicable Regions/Countries	United States of America
Declaration Format	TSCA Section 2607



5.6 Conflict Minerals

In 2010, Congress passed the Dodd-Frank Act, which directs the Commission to issue rules requiring certain companies to disclose their use of conflict minerals if those minerals are “necessary to the functionality or production of a product” manufactured by those companies. Under the Act, those minerals include tantalum, tin, gold or tungsten (3TG).

Congress enacted Section 1502 of the Act because of concerns that the exploitation and trade of conflict minerals by armed groups is helping to finance conflict in the DRC region and is contributing to an emergency humanitarian crisis. Section 1502 of the Act amends the Securities and Exchange Act of 1934 to add Section 13(p).

Table 6

Reference Number	Dodd-Frank Act; Section 1502; General Rules and Regulations, Securities Exchange Act of 1934
RSL / DSL	Cassiterite, columbite-tantalite, gold, wolframite, or their derivatives, or any other minerals or their derivatives determined by the Secretary of State.
Exemptions	<u>None Applicable</u>
Applicable Regions/Countries	United States of America
Declaration Format	Latest CMRT Reporting Template



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5.7 California Proposition 65

Proposition 65 requires businesses to provide warnings to Californians about significant exposures to chemicals that cause cancer, birth defects or other reproductive harm. Exposure to these chemicals may take place when products are acquired or used.

Proposition 65 also prohibits California businesses from knowingly discharging significant amounts of listed chemicals into sources of drinking water.

Proposition 65 requires California to publish a list of chemicals known to cause cancer, birth defects or other reproductive harm. This list was first published in 1987 and must be updated at least once a year.

The official name of Proposition 65 is the Safe Drinking Water and Toxic Enforcement Act of 1986.

Table 7

Reference Number	Safe Drinking Water and Toxic Enforcement Act of 1986
RSL / DSL	Proposition 65 Substance List
Exemptions	Section 25249.10
Applicable Regions/Countries	United States of America
Declaration Format	27 CCR Section 25603



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5.8 Doosan Bobcat Specific Requirements

Doosan Bobcat reserves the authority to impose restrictions or request chemical information on specified substances that may not otherwise be regulated globally. Doosan Bobcat also reserves the right to require material disclosures regarding any substances present within any supplied raw material, component, or sub-assembly to fulfill internal obligations. Substances within this category shall be identified within a list provided by Doosan Bobcat. Updates to this internal list shall be communicated in advance to formal requests for compliance.

5.9 Other Regional Regulations and Directives

As global regulatory requirements change, additions to the requirements listed within this document will be updated to reflect those changes. All suppliers shall comply and assist Doosan Bobcat to also comply with all global and regional chemical regulatory requirements, which may not be listed within this standard.

5.10 Customer And Unregulated Requests

In scenarios involving unique and reasonable requests from end customers or other requestors that are either supported or not supported by officially published regulations or directives, suppliers shall assist Doosan Bobcat with providing the requested information.



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6. Engineering/Service Parts Drawings

All engineering and service drawings released or revised by Doosan Bobcat after the publication of this document shall reference this engineering standard. The timeline to update all drawings not subject to being released or revised at the time of publication of this standard shall be determined by the Doosan Bobcat Product Engineering and Chemical Compliance Teams. The most current version of this standard shall be referenced at all times and shall be accessed through the Doosan Bobcat supplier portal. Any deviations to the requirements of this standard shall be approved by Doosan Bobcat Product Engineering and Chemical Compliance teams.

7. Procurement Requirements

The Doosan Bobcat procurement process shall include the obligations listed below as supplements to existing supplier guidance and new supplier approval processes. This document shall be provided during the early design phase in addition to the design specification of the supplied materials or components.

7.1 New Supplier Approval

7.1.1 To fulfill all global regulatory obligations, Doosan Bobcat requires all new suppliers to make available sufficient proof of the necessary capabilities to provide chemical disclosures to specific lists as detailed in section 8 of this standard.

- Disclosures to specific lists shall be provided before the manufacturing or delivery of any production components as detailed in section 8 of this standard.
- Deliverables may also include, but are not limited to, supply chain chemical disclosures, certified chemical lab analysis of components, ISO 9001 and 14001 process documentation, and third-party process audits.

7.1.2 Doosan Bobcat reserves the right to require the disclosure of the full chemical makeup of all provided components (FMD) in lieu of disclosures to specific lists as described in 7.1.1.

- This full chemical makeup shall include an allowance of up to 10% of the overall weight of the component as non-disclosed substances to allow for the protection of intellectual property. This allowance only pertains to regulations and directives that allow for the use of non-disclosed materials.

7.1.3 In the event a supplier is unable to initially provide sufficient proof of capabilities per 7.1.1 and 7.1.2, it will result in the supplier's contractual obligation to implement sufficient measures to provide deliverables per 7.1.1 and 7.1.2 for all provided components within a timeframe as agreed upon in writing by the Doosan Bobcat Procurement, Supplier Development, and Chemical Compliance teams.

7.1.4 Suppliers shall allow Doosan Bobcat to review the processes used to provide the deliverables described in 7.1.1 and 7.1.2 to ensure a level of accuracy deemed adequate by the Doosan Bobcat Chemical Compliance team.

7.2 Deliverables as stated in 7.1.1 and 7.1.2 shall be completed prior to Doosan Bobcat approval for manufacturing production parts.



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7.3 Existing Supplier Guidance

- 7.3.1 Current suppliers within the Doosan Bobcat supply chain shall provide chemical disclosures to specific lists as detailed in section 8 of this standard.
- 7.3.2 Compliance roadmaps to achieving FMD disclosures shall be agreed upon by Doosan Bobcat Procurement and Chemical Compliance teams.
- 7.3.3 Doosan Bobcat reserves the opportunity to amend any existing contracts based on unwillingness to fulfill regulatory obligations as detailed within this standard. This may include a revision or termination of the contract.
- 7.3.4 Doosan Bobcat reserves the opportunity to review the processes used to provide the deliverables described in 7.1.1 and 7.1.2 to ensure a level of accuracy deemed adequate by the Doosan Bobcat Chemical Compliance team.
- 7.3.5 Doosan Bobcat reserves the opportunity to require deliverables as stated in 7.1.1 and 7.1.2 to be part of the Supplier Development and component approval processes pending approval of the Doosan Bobcat Procurement and Chemical Compliance teams.

8. Required Declarable and Restricted Substance Obligations

The following information is required as part of a formal declaration process to fulfill both contractual agreements between Doosan Bobcat and its supply chain as well as to comply with regional regulations as listed in Section 2 of this standard. All entities that exist within the Doosan Bobcat supply chain shall adhere to these requirements to ensure market compliance. If discrepancies exist between the requirements given in this standard and those listed in the most current published version of a regulation or directive, the regulation or directive shall take priority.

All declarations provided directly to Doosan Bobcat shall be formatted on supplier company letterhead and be signed and dated by an authorized representative of the supplier. Doosan Bobcat reserves the right to review and reject any provided notifications due to insufficient information provided within the notification. If solicited by an approved third-party contractor, any requested declarations to show compliance to any regulations or directives shall be provided through that contractor in all acceptable formats (e.g. IPC-1752 and 1754 formats).

8.1 EU REACH

- 8.1.1 Supplier will register, and provide Doosan Bobcat the necessary information to register, substances contained in the supplied materials and articles to ECHA. Required information to include within the registration is stated in Article 10.
- 8.1.2 If a substance is present in a material or article above a concentration of 0.1% weight by weight (w/w) and is found on the Authorization or SVHC Lists (Articles 57 and 59), suppliers shall provide the following information:
 - The identity and contact details of the producer or importer
 - The registration number(s)
 - The identity of the substance



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- The classification of the substance(s)
- A brief description of the use(s) of the substance(s) in the article
- Mass of the substance(s) contained in the article
- Safe use instructions
- Safety data sheet
- % concentration in weight over weight (%w/w)

8.1.3 Suppliers shall not provide materials or articles that contain substances on the restricted list per Article 67.

8.1.4 Doosan Bobcat reserves the right to request documentation from suppliers declaring the presence of substances on the Authorization or SVHC Lists (Articles 57 and 59), regardless of article exemption status (defined in Annex IV or Annex V).

8.2 EU Waste Framework Directive

In addition to section 8.2, if a substance is present in a material or article above a concentration of 0.1% weight by weight (%w/w) and is found on the Authorization or SVHC Lists (Articles 57 and 59), suppliers shall provide the information included in Section 3 of the **Detailed Information Requirements** for the SCIP Database link included in the EU WFD portion of section 5 of this standard.

8.3 EU RoHS Directive

8.3.1 Any supplier of materials or articles (i.e. EEE) as defined by the RoHS directive shall not contain substances included in the Restricted List as defined by Annex II.

8.3.2 Doosan Bobcat reserves the right to request documentation from suppliers declaring the presence of substances listed within Annex II, regardless of article or product exemption status as defined in Article 2, Annex III, or Annex IV.

8.4 EU Biocides

8.4.1 Suppliers shall not provide any treated articles unless all active substances contained in the biocidal products that it was treated with or incorporates are included in Article 95.

8.4.2 Suppliers of treated articles shall ensure that the product label provides sufficient information as defined in Article 58.

8.5 U.S. Toxic Substances Control Act

8.5.1 Notification Obligations

8.5.2 Suppliers shall ensure that all substances contained within the materials or articles provided to Doosan Bobcat are registered within the TSCA inventory list.



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- 8.5.3 Suppliers shall provide notification to Doosan Bobcat of substances contained within articles that are listed under the Assessment and Management of Chemicals under TSCA, such as the chemical Prioritization, Evaluation, and Management lists (including substances with low priority designations).
- 8.5.4 If a substance listed in the Assessment and Management of Chemicals under TSCA is present, suppliers shall provide the following information to Doosan Bobcat:
- The identity and contact details of the producer or importer
 - The registration number(s)
 - The identity of the substance
 - The classification of the substance(s)
 - A brief description of the use(s) of the substance(s) in the article
 - Mass of the substance(s) contained in the article
 - Safe use instructions
 - Safety data sheet
 - Percent concentration in weight over weight (%w/w).
- 8.5.5 If suppliers provide materials or articles to Doosan Bobcat that contain perfluoroalkyl or polyfluoroalkyl substances, they shall submit a notification to the EPA and Doosan Bobcat. Reports provided to Doosan Bobcat shall include the information as stated in 8.5.4. Reports to the EPA shall include the information as specified in TSCA section 2607(a)(7).
- 8.5.6 Suppliers shall maintain records documenting compliance with the rule and supporting confidentiality claims shall be maintained for a period of 5 years beginning on the last day of the submission period per TSCA section 2607(b)(9).
- 8.5.7 Suppliers of materials or articles shall not include any substance included on the PBT material restriction list or any additional EPA regulations referencing the restriction of materials.
- 8.6 Conflict Minerals
- 8.6.1 Suppliers shall report the presence of conflict resources in components to Doosan Bobcat via the latest Conflict Minerals Report Template (CMRT) per CFR 240.13p-1 of the Exchange Act and shall be certified by an independent auditor
- 8.6.2 Doosan Bobcat and its suppliers shall use smelters and refiners that participate in the Responsible Minerals Assurance Process ([RMAP](#)) and undergo independent audits to validate their sourcing as conflict-free or responsibly sourced.
- 8.6.3 In the event a supplier is unable to comply per 8.6.1, it will result in the supplier's contractual obligation to become compliant within a timeframe as agreed upon in writing by the Doosan Bobcat Procurement, Supplier Development, and Chemical Compliance teams.



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8.7 California Proposition 65

- 8.7.1 Suppliers providing materials or articles to Doosan Bobcat that are intended to be sold in the state of California and contain a chemical which is included on the Proposition 65 Substance List shall include a declaration stating the presence and concentration of that chemical in % weight over weight (%w/w).
- 8.7.2 Machines manufactured by, or for, Doosan Bobcat shall include an appropriate exposure label affixed to the equipment and a warning included in the operation and service manuals as defined in 27 CCR Section 25603, including hydraulically powered attachments and pallet forks.
- 8.7.3 Components supplied from a Doosan Bobcat warehouse, or components that are directly shipped by a supplier, to the state of California shall include an appropriate exposure label as defined in 27 CCR Section 25603 on its package.