



BASTA

Properties criteria - BETA

- according to Regulation (EC) No. 1272/2008 (CLP)

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Introduction

The BETA-register is a part of the BASTA-system. Products that are registered in the BETA-register may not contain substances with properties according to agreed criteria, at concentrations equal to or above specified limits. As these criteria are less stringent than the BASTA-criteria¹⁾, products registered in the BETA-register may be associated with risks. The supplier must therefore specify which BASTA-criteria the product does not meet.

The supplier of products in the BETA register should provide information in the form of environmental and health and safety information, see template on <http://www.bastaonline.se/dokument/>, for the assessment of risks during handling, usage, demolition and waste, as well as instructions for handling such risks. For chemical products, a safety data sheet is sufficient as environmental and health safety information provided that it complies with the REACH Regulation, Title IV (Information in the supply chain).

Products that meet the BASTA-criteria shall be registered in the BASTA-register ¹⁾

The criteria are based on the European Chemicals Legislation REACH, where substances of very high concern are specified. All substances covered by the criteria on REACHs candidates list have particularly hazardous properties.

A requirement and information obligation exist for substances found on the candidates list, which has a harmonised classification limit of 0.1% and are present in amounts below specified concentration limits in the BASTA- and respective the BETA-criterion. When the concentration limit of the substance is 0,1% or more, the chemical designation and CAS-number shall be indicated during registration.

The criteria have been based on the **Regulation (EC) No. 1272/2008** on classification, labelling and packaging of substances and mixtures (**CLP**).
http://echa.europa.eu/documents/10162/13562/clp_labelling_en.pdf

If the classification of a mixture/preparation²⁾, due to its properties differ from the included substances³⁾ respective classification, it is the classification of the preparations that applies if this is the way the product is delivered to the construction site (or equivalent).

Concentrations are to be considered for the product in the form it is delivered to a building site or equivalent. Chemicals that have been used in manufacturing but are not present in the delivered product do not need to be considered.

For complex articles that consist of several parts, the basis for calculations should be the weight of the individual part that contains the substance, not the total weight of the complex article. The concentration, which is compared to the BASTA defined concentration limit, should therefore be calculated on each part of a complex article which itself meets the definition of an "article" in **article 3.3 in the REACH regulation** (see note 11).

The properties criteria describe the substance properties which the BASTA-system aims to phase out. The accepted concentration limit normally allowed in the product is shown. (NOTE: It happens in some cases that other concentration limits are specially specified, see note 2) It is shown in the table below if a summation of different substances with similar properties shall be done. In addition there are footnotes with additional information. There is also a list of hazard phrases used in this document.

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Properties criteria in the BETA-register

Substance Properties	Definition	Concentration limit (by weight) (if specific limits not are specified) ^{4), 11)}	Summation ¹²⁾
1. Carcinogenic	Substances with properties according to hazard class of carcinogenic in category 1A and 1B (H350) ⁵⁾	0.1%	—
2. Mutagenic	Substances with properties according to hazard class of mutagenic in category 1A and 1B (H340) ⁵⁾	0.1%	—
3. Toxic to reproduction	Substances with properties according to hazard class of toxic to reproduction in category 1A and 1B (H360) ⁵⁾	0.3%	—
4. Effect during lactation	Substances that meet the hazard class Reproductive toxicity, category Effects on or via breastfeeding (H362) ⁵⁾	0.3%	—
5. Endocrine disrupting	The criterion will cover the substances which will receive the overall assessment Cat 1 or Cat 2 in EU's - EDS Database ⁷⁾ and substances included in the Candidates list with endocrine disrupting properties in accordance with REACH Article 57f.	0.1%	—
6. Persistent, bio accumulative and toxic organic compound ⁷⁾ (PBT)	Substances with 1) a half-life > 60 days in marine water or >40 days in fresh- or estuarine water or > 180 days in marine sediment or >120 days in fresh- or estuarine sediment or >120 days in soil and 2) BCF (Bio Concentration Factor) >2000 l/kg (wet weight) and 3) Toxicity NOEC or EC10 < 0.01mg/l or CMR – Carcinogenic 1A, 1B (H350). Germcell Mutagenic 1A, 1B (H340). Toxic for reproduction 1A, 1B, 2 (H360 and H361) or classified H372 or H373	0.1%	—
7. Very persistent and very bio accumulative organic compound ⁶⁾ (vPvB)	Substances with 1) a half-life > 60 days in marine-, fresh- or estuarine water or > 180 days in marine-, fresh- or estuarine sediment or > 180 days in soil and 2) BCF (Bio Concentration Factor) >5000 l/kg (wet weight)	0.1%	—
8. Lead (Pb)	Lead or compounds of lead	0.1% ⁸⁾	Yes
9. Mercury (Hg)	Mercury or compounds of mercury	Total ban ⁹⁾	Yes
10 Cadmium (CD)	Cadmium or compounds of cadmium	0.01%	Yes
11. Dangerous to the ozone layer	Substances with Ozon Depletion Potential (ODP) > 0 (EUH 059, H420) ⁸⁾	0.1%	—

NOTES

- 1) See properties criteria –BASTA ¹⁾
- 2) Chemical element and its compounds in natural or prepared form, including additives necessary to product stability and any impurities from the production process, but excluding solvents which may be separated without affecting the stability of the substance or changing its composition
- 3) Preparations: means mixtures or solutions composed of two or more substances.
- 4) In cases where a concentration limits differs, higher or lower, from the specified limit found in **table 3.1 in Annex VI** to the Council Directive on classification, labeling and packaging of substances and mixtures (**CLP**) (**Regulation (EC) No. 1272/2008**), this concentration limit applies instead of the concentration specified within the criterion.
In the event that a product consists of plastic or rubber components that contain any PAHs covered by Commission Regulation (**EC**) **No 1272/2013** of 6 December 2013 **amending Annex XVII to Regulation (EC) No 1907/2006** of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (**REACH**) as regards polycyclic aromatic hydrocarbons, and any of these parts come into direct and prolonged or short-time repeated contact with the human skin or oral cavity, under normal or reasonably foreseeable conditions of use, the concentration limit under this Directive applies.
- 5) In accordance with Regulation (**EC**) **No. 1272/2008 (CLP)**. The assessment is to be based on all relevant data on the hazardousness to health and the environment of the product. The criteria are directly applicable when data are obtained from information requirements described in **article 13** to regulation (**EC**) **no. 1907/2006 (REACH)**. If for a given property that is hazardous to health or the environment, there are data from several studies which, according to the criteria, would lead to differing classification, the data that result in the strictest classification are to be used provided they are of good scientific quality.
- 6) EU's - EDS Database can be downloaded at: http://ec.europa.eu/environment/chemicals/endocrine/strategy/being_en.htm, To extract the database, please follow these instructions:
 1. Download the zipped file to your hard-disk
 2. Unzip the file and run the database (by a double-click on the mdb-file).
 3. Choose "Categorisation" in order to view the substances that are included in the database.The minimum requirement is MS Access 2003 or later versions. Please note that this also includes other CAS numbers of the substances which are covered by EDS database Cat 1 and Cat 2.
- 7) There are substances that fulfil the criteria for both PBT and vPvB. They must be tested both according to the criteria 6 and 7, if such substances are present in the product. The criteria for potentially PBT according to PRIO (www.kemi.se) can, in cases where it indicates no potential and where no other data exist, be used as a base for the PBT-classification.
- 8) The intention is that the concentration of these substances shall be close to zero. The BETA registry allows exceptions to the concentration limit 0.1% in accordance with the RoHS Directive (**2011/65/EU**).
- 9) In accordance with the Swedish directive (**1998:944**) there is a general Swedish ban on mercury with specified exclusions. **Low concentrations of mercury that are not intentionally added in any stage thus fall outside the prohibition. But such traces/contamination of mercury should not exceed 2.5 mg/kg. Deviations exceeding 2.5 mg/kg are permitted in cases where they stem from natural occurrence in coal, ore or ore concentrate.** In the BETA-register, exception according to the RoSH directive is accepted (**2011/65/EU**).
- 10) According to Guidance on the Application of the CLP Criteria (<http://echa.europa.eu/web/guest/guidance-documents/guidance-on-clp>) means any substances with ODP (Ozone Depletion Potential) $\geq 0,005$. Known substances are listed in **Annex I to Regulation (EC) No. 1005/2009**: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:286:0001:0030:EN:PDF>

11) For complex articles that consist of several parts, the basis for calculations should be the weight of the individual part that contains the substance, not the total weight of the complex article. The concentration, which is compared to the BASTA defined concentration limit, should therefore be calculated on each part of a complex article which itself meets the definition of an "article" in **article 3.3 in the REACH regulation**:

"An article is an object which during production is given a special shape, surface or design which determines its function to a greater degree than its chemical composition". An object that in a certain step in its life cycle has become an article, will normally remain an article until it eventually becomes waste after end use ("once an article, always an article").

During an industrial process, a chemical product may cease to be a chemical product and become an article. When an undesired substance is found in the chemical product, it is the weight of the new article that is formed in the process where the chemical product becomes an article which is used to calculate the concentration of the undesired substance when applying the BASTA criteria. For example, if two boards are glued together and an undesired substance is present in the adhesive layer, it is the weight of the new articles, i.e. the joined boards, that is used to calculate the concentration of the undesired substance.

If a board instead is covered with a laminate, which is defined as a separate article by the REACH definition, and there is an undesired substance present in the laminate; it is the weight of the laminate itself that is used to calculate the concentration of the undesired substance.

12) Summation of the concentrations of various substances with similar properties.

Risk phrases used in these criteria

H 340	May cause genetic defects
H 350	May cause cancer
H 360	May damage fertility or the unborn child
H 362	May cause harm to breastfed children
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
H 420	Harms public health and the environment by destroying ozone in the upper atmosphere
EUH 059	Hazardous to the ozone layer

The links contained in the document are updated outside of BASTA's control. BASTA is not responsible ensuring that the links are updated at all times but refer to the relevant website. The criteria are continuously reviewed to conform and adapt to new legislation, knowledge and objectives in the chemicals field. New versions of the criteria will enter into force on January 1st or alternatively on July the 1st.

Information about construction products that meet the properties criteria are found on the web-site www.bastaonline.se E-mail address is bastaonline@ivl.se You can also contact BASTAonline AB, Box 21060, SE-100 31 Stockholm, Sweden. Telephone +46 010 788 65 00 for more information.