

## Skanska in Sweden's criteria for chemical substances

Products (chemical products and built-in products) must be controlled against Skanska in Sweden's list of *restricted* substances, and Skanska in Sweden's criteria for *phase-out* substances. Chemical products must also be controlled against Skanska in Sweden's criteria for *observe hazard*. A product that fulfills all criteria is *approved*.

## Restricted substances

The list of restricted substances contains substances that do not comply with Skanska in Sweden's environmental policy or Swedish law. Purchase or usage of products containing these substances is forbidden within Skanska's business in Sweden or by any of its subcontractors.

Substance	Example of usage	Conc. limits (weight %)	Dangerous to
<b>Acrylamide</b> Monomer	Laboratory analysis, glue, paint, plastic, varnish, grouting/injection agent, water purification.	<0,1	Human health
<b>Arsenic</b> As wood preservative. (This restriction is also valid for usage in contact with ground and water and for usage in marine environment. Exceptions exist.)	Wood preservative.	0	Human health
<b>Asbestos</b>	Ventilation ducts, chipboard, insulation and filling and reinforcing material. May be found in older constructions and products.	<0,5	Human health
<b>Brominated Flame Retardants</b> <i>Approx. 70 different BFRs</i> PBT PBB PentaBDE octaBDE decaBDE HBCDD	XPS and EPS insulation materials, certain plastic, textiles, electric switches, relays, insulation and fuses, vinyl floor covering.	<0,1	Human health and Environment
<b>Cadmium</b> As surface treatments, stabilizer and pigment in electrical and electronic equipment. Exempt for use in NiCd batteries.	Surface treatments, stabilizer and pigment in electrical and electronic equipment.	<0,01	Human health and Environment
<b>CFC</b>	Cooling/refrigeration agent, propellant agent in insulation, jointing, sealing materials and aerosol cans.	0	Environment
<b>Chlorinated solvents</b> Exceptions exist, for example, dichloromethane used in analysis work.	Cleaning products.	<0,5	Human health and Environment
<b>Chloromethyl methyl ether</b> Exceptions for use in research, development and analysis in professional use.	Cleaning agents.	<0,1	Human health
<b>Chrome</b> As wood preservative above ground. Exceptions exist.	Wood-preservative used in pressure impregnation.	<0,5	Human health and Environment
<b>Chromium VI</b> Soluble chromium VI in cement and	Chromium VI occurs naturally in cement, but should be actively reduced by the producer. Chromium VI is also used in surface treatments.	<0,0002 (in cement)	Human health and Environment

Substance	Example of usage	Conc. limits (weight %)	Dangerous to
cement-containing preparations, and in electrical and electronic equipment.		<0,1 (in electrical and electronic equipment)	
<b>Coal tar/Creosote</b> Treated wood for use inside buildings, in playgrounds, parks and outdoor recreational and leisure facilities.	Wood preservative.	0	Human health
<b>1,4-dichlorobenzene</b>	Solvents and biocide.	<0,1	Human health and Environment
<b>Erionite</b>	Potential impurity in natural materials used as catalytic converters and ion exchangers.	<1	Human health
<b>Halons</b>	Cooling/refrigeration agent and used in fire-extinguishing equipment.	0	Human health and Environment
<b>HCFC</b> Restrictions in/at new installments and filling up in existing systems.	Cooling/refrigeration agent.	0	Environment
<b>Lead</b> In electrical and electronic equipment.	Soldering.	<0,1	Human health and Environment
<b>Mercury</b> Batteries, thermometers, detonators, measuring instruments and electrical.	In accordance with the Swedish directive (1998:944) there is a general Swedish ban on mercury with specified exclusions.	0	Human health and Environment
<b>Nonylphenol and nonylphenol ethoxylate</b> For cleaning, metal working or as components in pesticides and biocides.	Paints, resins, protective coatings, detergents, degreasers, pesticides, cleaning agents.	<0,1	Human health and Aquatic environment
<b>PCB</b>	Softener used in sealants agents, capacitors and transformer oils.	0	Human health and Environment
<b>PFOS</b>	Used in e.g. impregnated paper and textiles, cleaning agents (such as floor polish) and fire detergents.	<0,005 (as a substance or in preparations) <0,1 (in semi-finished products or in articles) <1 µg/m <sup>2</sup> (in textiles or other covered materials)	Human health and Environment
<b>Tin compounds (organostannic compounds)</b> Boat and anti-fouling paints and in any totally or partly submerged appliance or equipment.	Additive in paint.	0	Aquatic environment

## Phase-out and Observe Hazard

### Phase-out

Products containing substances with at least one of the properties mentioned below may not be used within Skanska's business in Sweden or by its subcontractors if the concentration exceeds the limit concentration in the column *Phase-out*. Exceptions may only be made if there is no alternative product. In such cases, a reason must be stated.

The list of properties is identical with BASTAs properties criteria. The concentration calculations are based on the product as it is delivered to the worksite or the corresponding.

### Observe hazard

*Observe hazard* only applies to some of the below mentioned property criteria, and is only valid for chemical products. Chemical products containing substances with at least one of the properties mentioned below within the concentration interval stated in the column *Observe hazard* must be handled in such a manner that the risks involved are minimized. An *approved* product shall always be chosen, if possible.

Products containing specific substances/groups of substances of which there is a lack of knowledge may also be evaluated as *phase-out* or *observe hazard*, based on the precautionary principle. Exceptions from some of the below stated property criteria for certain product groups may also occur.

## Base criteria that applies to all products

Properties (substances)	Criteria	Phase-out	Observe hazard
		Concentration (weight %) <sup>1)</sup>	
<b>1. Carcinogenic</b>	a) Substances <sup>1)</sup> with properties according to hazard class of carcinogenic in category 1A or 1B (H350) <sup>2)</sup> .	≥0,1	-
	b) Substances with properties according to hazard class of carcinogenic in category 2 (H351) <sup>2)</sup> .	≥1	-
<b>2. Mutagenic</b>	a) Substances with properties according to hazard class of mutagenic in category 1A or 1B (H340) <sup>2)</sup> .	≥0,1	-
	b) Substances with properties according to hazard class of mutagenic in category 2 (H341) <sup>2)</sup> .	≥1	-
<b>3. Toxic to reproduction</b>	a) Substances with properties according to hazard class of toxic to reproduction in category 1A or 1B (H360) <sup>2)</sup> .	≥0,3	-
	b) Substances with properties according to hazard class of toxic to reproduction in category 2 (H361) <sup>2)</sup> .	≥3	-
<b>4. Effect during lactation</b>	Substances with properties according to hazard class of: may cause harm to breastfed children (H362) <sup>2)</sup>	≥ 0,3	-
<b>5. Endocrine disturbing</b>	The criterion will cover the substances which will receive the overall assessment Cat 1 or Cat 2 in EU's EDS Database <sup>3)</sup> and substances included on the candidate list due to having Endocrine disrupting properties in accordance with REACH Article 57f.	≥ 0,1	-
<b>6. Very persistent and very bio accumulative organic compound (vPvB) <sup>4)</sup></b>	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) > 5 000 l/kg (wet weight)	≥0,1	-

Properties (substances)	Criteria	Phase-out	Observe hazard
		Concentration (weight %) <sup>1)</sup>	
<b>7. Persistent, bio accumulative and toxic organic compound (PBT)</b> <sup>4)</sup>	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 < 0.01 mg/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	-
<b>8. Potentially persistent, bio accumulative and toxic organic compound</b>	<i>There is for the time being no generally confirmed definition for a potentially persistent, bio accumulative and toxic organic compound. The criteria document will be amended when such definition is at hand.</i>	-	-
<b>9. Lead (Pb)</b>	Pure substances or compounds of lead (Pb)	≥0,1 <sup>9)</sup>	-
<b>10. Mercury (Hg)</b>	Pure substances or compounds of mercury (Hg)	Total ban <sup>5)</sup>	-
<b>11. Cadmium (Cd)</b>	Pure substances or compounds of cadmium (Cd)	≥0,01 <sup>9)</sup>	-
<b>12. Dangerous to the ozone layer</b>	Ozon Depletion Potential (ODP) >0 (EUH 059, H420) <sup>6)</sup>	≥0,1	-
<b>13. Sensitizing</b> <sup>7)</sup>	Substances with properties according to hazard class of causing respiratory sensitisation and/or skin sensitisation (H334, H317) <sup>2)</sup>	≥1 (≥0,2 for H334)	-
<b>14. Acute toxic</b>	Substances with properties according to hazard class of Acute toxicity in category 1, 2 or 3 (H300, H310, H330, H301, H311 or H331): Oral (H300, H301) Dermal (H310, H311) Inhalation (H330 eller H331)	The ATE-values that would at least classify the mixture as Acute toxicity, category 3 <sup>2)</sup> ATE ≤ 300 ATE ≤ 1000 For gases ATE ≤ 2500 For vapours ATE ≤ 10 For dust/mist ATE ≤ 1,0 Summation should be performed for each relevant exposure route	0,1 – limit for phase out

<b>15. Specific target organ toxicity after single exposure</b>	a)	Substances that have properties according to the criteria of the toxic hazard category: risk of serious permanent damage to health by inhalation, skin contact or ingestion 2) (H371, H373)	$\geq 10$	0,1 - <10
	b)	Substances that meet the criteria for hazard classes Specific target organ toxicity for single/repeated exposure (STOT-SE) in category 1 (H370, H372) 2)	$\geq 1$	0,1 - <1
	c)	Chemical products with properties according to the classification Aspiration toxicity in category 1 (H304)	The criteria are not a substance criterion but apply to chemical products.	-
<b>16. Volatile organic Compounds</b> 7)		Substances with an initial boiling point < 250 °C measured at a standard pressure of 101,3 kPa <b>and</b> has properties according to any of the hazard classes: Fatal, Toxic and Harmful if inhaled (H330, H331, H332) May cause drowsiness or dizziness (H336) May cause damage to organs (H371) or May cause damage to organs through prolonged or repeated exposure (H373).	$\geq 10$ 9)	-
<b>17. Dangerous to the environment</b>	a)	Substances that meet the criteria for the hazard class Hazardous to the aquatic environment, category acute 1 (H400) 2)	$\geq 25$ % if M = 1 8) 9)	0,1 – limit for <i>phase out</i>
	b)	Substances that meet the hazard class Hazardous to the aquatic environment, category chronic 1 and 2 (H410) and (H411)	2,5% for H410 substances M=1 25% för H411 substances 8) 9)	0,1 – limit for <i>phase out</i>
	c)	Substances that meet the criteria for hazard class Hazardous to the aquatic environment, category chronic 4 (H413). Calculation is made for mixtures that do not meet the criteria for chronic 1, 2 or 3. The summary includes topics classified chronically 1 (H410), chronic 2 (H411), chronic 3 (H412), chronic 4 (H413).	$\geq 25$ 8) 9)	1 - <25

## Notes

- 1) 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 201

3 amending Annex XVII to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Re-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.

- 2) 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. The different ATE-values for each relevant exposure route (criteria 13) are presented in "Methods of calculation for BASTA".
- 3) EU's - EDS Database can be downloaded at: [http://ec.europa.eu/environment/chemicals/endo-crime/strategy/being\\_en.htm](http://ec.europa.eu/environment/chemicals/endo-crime/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 "Categorization" in order to view the substances that are included in the database. Minimum requirement: MS Access 2003 or later. Please note that this also encompasses the other CAS numbers of the substances subject to the EDS database of Cat 1 and Cat 2.
- 4) 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](http://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.
- 5) 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.**
- 6) According to "Guidance on the Application of the CLP Criteria" (the latest version will be found at: <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://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:286:0001:0030:EN:PDF>
- 7) The initial boiling point is set in accordance with directive 2004/42/EC with the concentration limit in agreement with the paint, adhesive and sealants trade. The concentration limits are according to Directive 1999/45/EC Annex II.  
In the case that lower concentrations are stipulated for paints and lacquer in Council Directive 2004/42/EG, they should apply.
- 8) If none of the environmentally hazardous substances in the product have any specific lower concentration limit stated in Annex VI, table 3.1 in the Council Directive on classification, labelling and packaging of substances and mixtures (CLP) (Regulation (EC) No. 1272/2008), the following applies:
  - Criteria 17a: If the containing substances, which are classified H400 all have M=1, then a summation of their concentrations shall be done, and the concentration limit will be 25%.
  - For substances with other M-values the concentration limits are according to the table 4.1.3,



Annex 1, according to CLP (with current changes). For summation of substances with different M-values, it shall be performed according to the "Method of calculation for BASTA".

- Criteria 17b: If the containing substances only are classified H410, all have M=1, then a summation of their concentration shall be done, and the concentration limit will be 2.5%. If no substances are classified H410, then a summation of the concentration of the containing substances classified H411 shall be done, and the concentration limit is 25%.

- 9) Summation of the content of different substances with the same properties.

### **N.B.**

The above criteria will be subdued to revision at intervals, in order to phase out substances with mentioned properties. Potential revisions may be made in order to adapt to new knowledge and to society's new demands and targets regarding chemical substances. The criteria will be harmonized according to changes in Regulation (EC) No. 1272/2008 (CLP) and Regulation (EC) no. 1907/2006 (REACH).

## **Hazard Statements used in these criteria**

H300 Fatal if swallowed  
H301 Toxic if swallowed  
H304 May be fatal if swallowed and enters airways  
H310 Fatal in contact with skin  
H311 Toxic in contact with skin  
H317 May cause an allergic skin reaction  
H330 Fatal if inhaled  
H331 Toxic if inhaled  
H332 Harmful if inhaled  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled  
H336 May cause drowsiness or dizziness  
H340 May cause genetic defects  
H341 Suspected of causing genetic defects  
H350 May cause cancer  
H351 Suspected of causing cancer  
H360 May damage fertility or the unborn child  
H361 Suspected of damaging fertility or the unborn child  
H362 May cause harm to breast-fed children  
H370 Causes damage to organs  
H371 May cause damage to organs  
H372 Causes damage to organs through prolonged or repeated exposure  
H373 May cause damage to organs through prolonged or repeated exposure  
H400 Very toxic to aquatic life  
H410 Very toxic to aquatic life with long lasting effects  
H411 Toxic to aquatic life with long lasting effects  
H412 Harmful to aquatic life with long lasting effects  
H413 May cause long lasting harmful effects to aquatic life  
H420 Harms public health and the environment by destroying ozone in the upper atmosphere  
EUH059 Hazardous to the ozone layer