

## 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 %)
<b>Acrylamide</b> Monomer	Laboratory analysis, glue, paint, plastic, varnish, grouting/injection agent, water purification.	<0,1
<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
<b>Asbestos</b>	Ventilation ducts, chipboard, insulation and filling and reinforcing material. May be found in older constructions and products.	<0,5
<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
<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
<b>CFC</b>	Cooling/refrigeration agent, propellant agent in insulation, jointing, sealing materials and aerosol cans.	0
<b>Chlorinated solvents</b> Exceptions exist, for example, dichloromethane used in analysis work.	Cleaning products.	<0,5
<b>Chloromethyl methyl ether</b> Exceptions for use in research, development and analysis in professional use.	Cleaning agents.	<0,1
<b>Chrome</b> As wood preservative above ground. Exceptions exist.	Wood-preservative used in pressure impregnation.	<0,5
<b>Chromium VI</b> Soluble chromium VI in cement and cement-containing preparations, and in electrical and electronic equipment.	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) <0,1 (in electrical and electronic equipment)

Substance	Example of usage	Conc. limits (weight %)
<b>Coal tar/Creosote</b> Treated wood for use inside buildings, in playgrounds, parks and outdoor recreational and leisure facilities.	Wood preservative.	0
<b>1,4-dichlorobenzene</b>	Solvents and biocide.	<0,1
<b>Erionite</b>	Potential impurity in natural materials used as catalytic converters and ion exchangers.	<1
<b>Phtalates</b> DEHP DBP BBP DIBP	PVC softener, cables, electronics, adhesives and sealants.	<0,1
<b>Halons</b>	Cooling/refrigeration agent and used in fire-extinguishing equipment.	0
<b>HCFC</b> Restrictions in/at new installments and filling up in existing systems.	Cooling/refrigeration agent.	0
<b>Lead</b> In electrical and electronic equipment.	Soldering.	<0,1
<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
<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
<b>PCB</b>	Softener used in sealants agents, capacitors and transformer oils.	0
<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)
<b>Tin compounds (organo-stannic compounds)</b> Boat and anti-fouling paints and in any totally or partly submerged appliance or equipment.	Additive in paint.	0

## 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 with properties according to hazard class of carcinogenic in category 1A or 1B (H350). <sup>1)</sup>	≥0,1	-
	b) Substances with properties according to hazard class of carcinogenic in category 2 (H351). <sup>1)</sup>	≥1	-
<b>2. Mutagenic</b>	a) Substances with properties according to hazard class of mutagenic in category 1A or 1B (H340). <sup>1)</sup>	≥0,1	-
	b) Substances with properties according to hazard class of mutagenic in category 2 (H341). <sup>1)</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>1)</sup>	≥0,3	-
	b) Substances with properties according to hazard class of toxic to reproduction in category 2 (H361). <sup>1)</sup>	≥3	-
<b>4. Effect during lactation</b>	Substances with properties according to hazard class of: may cause harm to breastfed children (H362) <sup>1)</sup>	≥ 0,3	-
<b>5. Endocrine disturbing</b>	Substances that are considered endocrine disrupters in accordance with the EU definition of endocrine disrupting substances.	≥ 0,1	-
<b>6. Very persistent and very bio accumulative or-organic compound (vPvB)</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	-
<b>7. Persistent, bio accumulative and toxic organic compound (PBT)</b>	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	-

Properties (substances)	Criteria	Phase-out	Observe hazard
		Concentration (weight %) <sup>1)</sup>	
<b>8. Lead (Pb)</b>	Pure substances or compounds of lead (Pb)	≥0,1 <sup>7)</sup>	-
<b>9. Mercury (Hg)</b>	Pure substances or compounds of mercury (Hg)	Total ban <sup>3) 7)</sup>	-
<b>10. Cadmium (Cd)</b>	Pure substances or compounds of cadmium (Cd)	≥0,01 <sup>7)</sup>	-
<b>11. Dangerous to the ozone layer and green house gases</b>	a) Substances meeting the criteria for the hazard class Hazardous to the ozone layer (EUH 059, H420) and all substances listed in the Annex to Regulation (EC) No 1005/2009 <sup>4)</sup>	≥0,1	-
	b) Synthetically produced fluorinated gases (f-gases) that are potent greenhouse gases and contribute to global warming. Includes fluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride, (SF6), see substances listed in Annex I to Regulation (EU) No 517/2014 <sup>4)</sup>	≥0,1	
<b>12. Sensitizing</b>	a) Substances with properties according to hazard class of causing respiratory sensitisation category 1A (H334) <sup>1)</sup>	≥0,1	-
	b) Substances with properties according to hazard class of causing respiratory sensitisation category 1 and 1B (H334) <sup>1)</sup>	≥0,2 gases ≥1 solid / liquid	
	c) Substances with properties according to hazard class of causing skin sensitisation category 1A (H317) <sup>1)</sup>	≥0,1	
	d) Substances with properties according to hazard class of causing skin sensitisation category 1 and 1B (H317)	≥1	
<b>13. Acute toxic</b>	Substances with properties according to hazard class of Acute toxicity in category 1, 2 or 3  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>1)</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 <sup>7)</sup>	0,1 – limit for <i>phase out</i>

<b>14. Specific target organ toxicity after single exposure</b>	a)	Substances with properties according to hazard class of Causes damage to organs after single exposure (STOT-SE) in category 1. (H370) <sup>1)</sup>	$\geq 1$	0,1 - <10
	b)	Substances with properties according to hazard class of Causes damage to organs after single exposure (STOT-SE) in category 2 (H371) <sup>1)</sup>	$\geq 10$	0,1 - <1
	c)	Chemical products with properties according to the classification Aspiration toxicity in category 1 (H304) <sup>2)</sup>	Refers to the product's classification <sup>2)</sup>	-
<b>15. Specific target organ toxicity after repeated exposure</b>	a)	Substances with properties according to hazard class of Causes Specific damage to organs through repeated exposure (STOT-RE) in category 1 (H372) <sup>1)</sup>	$\geq 1$	
	b)	Substances with properties according to hazard class of Causes Specific damage to organs through repeated exposure (STOT-RE) in category 2 (H373) <sup>1)</sup>	$\geq 10$	
<b>16. Volatile organic Compounds</b>		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).	$\geq 10$ <sup>5) 7)</sup>	-
<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) <sup>1)</sup>	$\geq 25$ % if M = 1 <sup>6) 7)</sup>	0,1 – limit for <i>phase out</i>
	b)	Substances that meet the hazard class Hazardous to the aquatic environment, category chronic 1 (H410) and 2 (H411) <sup>1)</sup>	2,5% for H410 substances M=1 <sup>6) 7)</sup> 25% for H411 substances <sup>6) 7)</sup>	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) <sup>1)</sup> . 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).	$\geq 25$ <sup>6) 7)</sup>	1 - <25

## Notes

- 1) For information about H-phrases, concentration limits and specific classification limits: see ECHA's classification database "C & L Inventory", In those cases where there are specific classification limits for individual substance content, that is, higher or lower than the content limits specified under each criterion, these apply. This applies to both substances with harmonized classification and non-

harmonized (self-classification). For PAHs in plastic or rubber components where exposure can occur by skin or mouth, the content limits apply in accordance to Reach EC 1907/2006 Annex XVII, entry 50. Granules or mulches for use as infill material in synthetic turf pitches or in loose form on playgrounds or in sport applications may not be registered if they contain more than 20 mg/kg (0,002 % by weight of the sum of all listed PAHs).

- 2) The criteria are not a substance criterion but apply to chemical products with the classification H304.
- 3) In accordance with criteria 9 there is a ban on mercury. The ban applies to articles where mercury has been used or added. 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.
- 4) Dangerous to the ozon layer, criteria 11a: according to "Guidance on the Application of the CLP Criteria", a substance is defined as ozone depleting if ODP (Ozone Depletion Potential) is equal to or greater than 0.005. These known substances are listed in Annex I to Regulation (EC) No 1005/2009. Greenhouse gases, criterion 11b: See listed substances in Annex I to Regulation (EU) No 517/2014). See also the Swedish Chemicals Agency's PRIO guide with a searchable database for substances covered by the information requirement for PFAS.
- 5) The initial boiling point is set in accordance with directive 2004/42/EG with the concentration limit in agreement with the paint, adhesive and sealants trade. In cases where a lower concentration limits is specified in KIFS 2008:2 or 2004/42/EG with current changes for paints and lacquers, those apply.
- 6) If no environmentally hazardous substances have specifically lower concentration limits such as specified in Regulation (EC) No 1272/2008 (CLP), (classifications and M-factors can also be found in ECHA's database, see footnote 1), the following applies:

Criteria 17a: If the containing substances, which are classified H400, all have M=1, then a summation of their concentrations can/shall be done, and the concentration limit will then be 25%. Cbe 2.5%. If no substances are classified H410, then a summation of the concentration of the containing substances classified H411 can/shall be done, and the concentration limit will then be 25%.

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

Criterion 17c: This is a collection criterion made for products that do not meet the criteria for chronic 1 (H410), chronic 2 (H411) or chronic 3 (H412). A summation



includes substances classified chronic 1 (H410), chronic 2 (H411), chronic 3 (H412), chronic 4 (H413). To meet the requirement the sum of the containing substances must be below 25%.

In cases where substances with different hazard categories are represented the above does not apply and 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). The summation of substances with different M-values shall be performed in accordance with the Method of calculation for BASTA.

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

### **N.B.**

The above criteria will be subduced 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