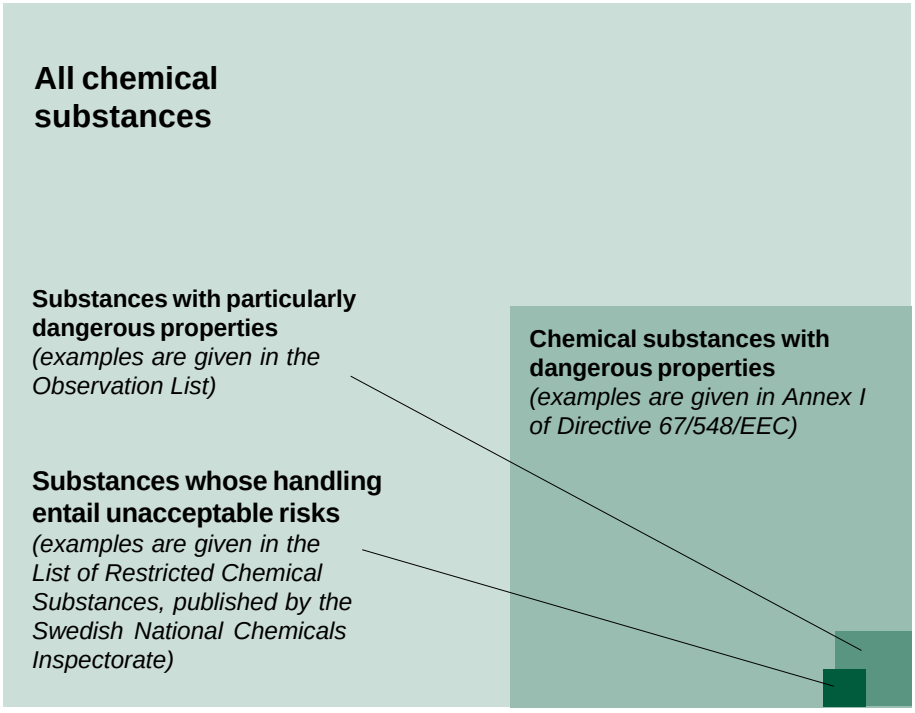
OBSERVATION LIST

examples of substances requiring particular attention

second, revised edition, 1998



Issued by the Swedish National Chemicals Inspectorate in collaboration with the Swedish Environmental Protection Agency and the Swedish National Board of Occupational Safety and Health

KEMI
NATIONAL CHEMICALS INSPECTORATE

OBSERVATION LIST

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CONTENTS

Preface

The present publication is a revised version of the one published in 1995. The revision was made by the Swedish National Chemicals Inspectorate in collaboration with the Swedish National Board of Occupational Safety and Health and the Swedish Environmental Protection Agency.

The Observation List presents a selection of substances whose properties in some applications may cause major risks to human health and/or the environment. Substances which are not included in the List but which fulfil at least one of the List's selection criteria of danger to human health or the environment should be considered in the same way as the examples appearing on the List.

The Observation List has proved very useful as a guidance document to companies and others handling chemicals in their work to examine and analyse the use of substances with particularly serious properties from the viewpoints of human health and/or the environment. In some cases the list has been interpreted as a list of prohibitions, but that neither was nor is the intention.

The selection of substances for the present Observation List differs from that in the previous list. The previous list contained substances derived from national and international lists. These substances were collected from the database compiled within the Chemicals Inspectorate's Sunset Project. The present revised List presents substances dangerous to human health which are derived from the Classification List of the Inspectorate's Regulations (KIFS 1994:12) on the Classification and Labelling of Chemical Products. Substances dangerous for the environment are derived from the IUCLID database (International and Uniform Chemicals Information Database).

As a result of the changed selection principles some 30 substances have been deleted from the previous list. Another 11 substances have been deleted from the previous list since they no longer occur in chemical products in quantities exceeding one ton. The total number of substances on the List, however, has increased with some 50 substances.

We hope that the List will contribute to the work of reducing risks to human health and the environment caused by the use of chemical products.

Solna, October 1998

Conny Brandt

Start here

The Swedish Chemical Products Act (1985:426) is based on the principle that anyone who manufactures, imports or sells chemical products is responsible for conducting chemicals control. The requirements in the legislation are clarified through Government Ordinances and Regulations and general recommendations issued by the authorities. One of the authorities' tasks is to verify that companies fulfil the responsibility laid on them.

The general responsibility of companies has been expressed in, for example, the precautionary rule in Section 5 of the Chemical Products Act. That rule stipulates risk-reducing measures, among them what is known as the substitution principle.

Purpose of the Observation List

The purpose of the Observation List is to provide information about certain substances with particularly serious properties from the viewpoints of human health and the environment.

Companies and others handling chemicals need continuously to study and analyse the use of such substances in their own work. For guidance purposes, the National Chemicals Inspectorate in collaboration with the National Board of Occupational Safety and Health, and the Environmental Protection Agency, have compiled the Observation List, containing substances whose properties in some applications may entail major risks to human health and/or the environment.

The Observation List gives examples

The List does not claim to be complete but gives examples of substances only. The criteria for danger to human health and the environment used for selecting the substances on the List are given on pages 12 and 13. Moreover, the List is limited to substances which occurred in Sweden in 1996 in chemical products in quantities exceeding 1 ton. Substances which are not included in the List but which fulfil at least one of the List's selection criteria of danger to human health or the environment should be considered in the same way as the examples appearing on the List.

For some effect areas, allergy for example, it is difficult at the present state of knowledge to draw a line between slightly and severely sensitising substances. For this reason, no ratings have been made for sensitising substances, and these, consequently, occupy a relatively large proportion of the List. Due to the current lack of knowledge about environmental properties of substances, substances dangerous for the environment are underrepresented on the List.

Pesticides must be pre-examined and approved by the National Chemicals Inspectorate before they can be used. When approval is granted, particular conditions are defined for using the preparation. In this way, active components of pesticides have already been chosen as particularly interesting from the viewpoint of risk and are therefore not included in the List, except for cases where, according to the Inspectorate's Products Register, chemical products have applications other than as pesticides.

The Observation List is not a list of prohibitions

It is important to point out that the presence of a substance on the Observation List does not entail a ban on its sale or use. Stringent restrictions apply for a few substances, however. These substances may be supplied and used in exceptional cases only.

The basic criterion for selecting substances for the Observation List was their dangerous properties (see the figure on the front page of this publication). The final decision on what, if any, measures are needed must be based on an assessment of the size of the risk and its character. This can seldom be done in a general way, but requires significant knowledge of use, exposure, number of exposures etc. Enterprises handling chemicals have to make an assessment of the risks which the use of the chemicals might give rise to in their own activity or at a subsequent stage of handling. The possibilities of risk limitation then have to be assessed, for example by choosing other, less dangerous chemicals, or by means of changed handling routines, process changes, and so on.

DISTINGUISH BETWEEN HAZARD AND RISK!

Hazard: The inherent potential of a substance to harm human beings or the environment. The hazard depends entirely on the properties of a substance.

Risk: The likelihood of harm occurring and its possible extent. Sufficiently large exposure of human beings and the environment is required for harm to occur.

The selection procedure

The grounds for selecting substances to the Observation List were chemical substances which fulfil at least one of the List's selection criteria of danger to human health or the environment and at the same time occurred in Sweden in 1996 in chemical products in quantities exceeding 1 ton, according to the Chemicals Inspectorate's Products Register.

The Observation List's selection criteria of danger to human health (see page 12) are identical to a selection of the criteria which are contained in Appendix 3 of the Chemicals Inspectorate's Regulations (KIFS 1994:12) on the Classification and Labelling of Chemical Products. Most substances dangerous to human health which appear on the Observation List are included in Appendices 5 and 6 (what is known as the Classification List) of the Regulations. A few substances dangerous to human health on the Observation List are, however, not included in the Classification List. They have been included in the Observation List when they carry a proposed EU classification which fulfils the requirements of the selection criteria of danger to human health according to the Observation List. These substances are specially marked in the List (see note 3 in the List). Compared with the previous list, neurotoxicity is not included in the grounds for selection since such criteria are missing within the EU, whereas the criterion of the Regulations for mutagenic properties (categories 1 and 2) has been added.

Appendix 6 to the Regulations KIFS 1994:12 includes about 600 complex carbon and oil-based substances which are not included in the Observation List. They are classified as carcinogenic in the Classification List, but under certain conditions they need not be classified with regard to this property. This is due to the included concentration of some scoring substances and is explained in notes J to P in the introduction to Appendix 6. If the substances fulfil the List's selection criteria for carcinogenic properties they should of course be considered in the same way as the substances on the Observation List.

With regard to the environment, only examples of substances with the most dangerous properties for the environment have been included in the Observation List. As a consequence, the grounds for selection of danger for the environment in the Observation List (see page 13) are more severe than the criteria indicated in KIFS 1994:12. Substances dangerous for the environment which have been added to the List originate from the IUCLID database (International and Uniform Chemicals Information Database). Substances derived from the IUCLID and included in the List have only been assessed based on their properties dangerous for the environment, unless they also appear on the Classification List as substances dangerous to human health.

Substances deleted from the previous list

Appendix 1 lists the substances which have been deleted from the Observation List because, according to the Chemicals Inspectorate's Products Register, they no longer occur in quantities exceeding 1 ton. In addition, some 30 substances have been deleted from the List due to the changed selection principles.

List headings

Name (synonym(s))
Chemical name for single substances or groups of substances, and for some substances one or more commonly occurring synonyms.

CAS No
Chemical Abstracts Services Registry Number.

Selection criteria
Letters a to i indicate the criterion or criteria of danger to human health or the environment prompting the choice of the substance or group of substances.

Preparation types
Preparation types (not exceeding three) which include the substance (largest amounts).This information is derived from the Chemicals Inspectorate's Products Register and is based on information reported to the Register by manufacturers and importers.

Number of preparations (consumer preparations within brackets)
For confidentiality reasons, the exact number has not been given if fewer than five preparations were reported. The information is derived from the Chemicals Inspectorate's Products Register and is based on information reported to the Products Register by manufacturers and importers.

Restrictions/targets
Regulations and targets restricting the occurrence of the substance are listed under this heading. The goals appear in Government Bills passed by the Swedish Parliament or in conventions ratified by Sweden. For the Code of Statutes SFS, AFS, SNFS and KIFS, reference is made to the basic regulation. See Appendix 2 for a complete reference list of statutes and Government Bills, indicated under the heading “Restrictions/targets” in the List.

SFS	The substance is regulated by the Swedish Code of Statutes.
AFS	The substance is regulated by the Code of Statutes of the National Board of Occupational Safety and Health.
SNFS	The substance is regulated by the Code of Statutes of the Swedish Environmental Protection Agency.
KIFS	The substance is regulated by the Code of Statutes of the National Chemicals Inspectorate.
Government Bill	A Government Bill on targets for restriction of the substance has been passed by the Parliament.
HELCOM	Decisions have been made within the framework of the Helsinki Commission (HELCOM) on targets for restricting the substance. HELCOM is a convention on the protection of the marine environment of the Baltic Sea area against pollution from both land-based sources and ships. The proposals in the convention are recommendations on measures to be taken by the member states.
OSPAR	Targets for restricting the substance have been defined within the framework of the Oslo Convention (OSCOM) and the Paris Convention (PARCOM). In 1992, OSCOM and PARCOM were amalgamated to form a new convention, OSPAR (Oslo and Paris Convention). This convention will be ratified during 1998. OSPAR covers the North East Atlantic and the North Sea, including the Skagerrak and the Kattegat, and aims at preventing pollution of the aquatic environment from land-based point sources and diffuse sources. The convention also deals with dumping. The decisions of the new convention will become binding on the member states.

SELECTION CRITERIA

DANGER TO HUMAN HEALTH

Properties	Criteria
a Very high acute toxicity	Substances with very high acute toxicity* with or without danger of very serious irreversible effects
b Sensitising properties	Substances which may cause sensitisation by inhalation and/or by skin contact
c High chronic toxicity	Substances which may cause serious damage to health by prolonged exposure and which are classified with the indication of danger Toxic**
d Properties impairing reproduction	Substances which may impair fertility and/ or may cause harm to the unborn child (categories 1 and 2)
e Carcinogenic properties	Substances which may cause cancer (high or medium-high carcinogenic ability)
f Mutagenic properties	Substances which may cause heritable genetic damage (categories 1 and 2)

* LD_{50} orally, rat: ≤ 25 mg/kg
LD_{50} dermally, rat or rabbit: ≤ 50 mg/kg
LC_{50} inhalation, rat ≤ 0,5 mg/l 4 hrs (gases, vapours)
LC_{50} inhalation, rat: ≤ 0,25 mg/l, 4 hrs (aerosols, particles)

** Orally, rat: ≤ 5 mg/kg body weight and day
Dermally, rat or rabbit: ≤ 10 mg/kg body weight and day
Inhalation, rat: ≤ 0,025 mg/l, 6 hrs/day
The above doses are based on subchronic (90-day) toxicity tests

The above criteria for danger to human health are contained in Appendix 3 to the National Chemicals Inspectorate's Regulations (KIFS 1994:12) on the Classification and Labelling of Chemical Products.

SELECTION CRITERIA

DANGER FOR THE ENVIRONMENT

	Properties	Criteria
g	High potential for bioaccumulation combined with low degradability	Bioconcentration factor (BCF) > 1 000* *and* low degradability in biodegradation tests**
	High potential for bioaccumulation combined with very high toxicity to aquatic organisms	Bioconcentration factor (BCF) > 1 000* *and* EC_{50} in short-term tests < 1 mg/l for aquatic organisms
	Low degradability combined with very high toxicity to aquatic organisms	Low degradability in biodegradation tests** *and* EC_{50} in short-term tests < 1 mg/l for aquatic organisms
h	Very high toxicity to aquatic organisms	EC_{50} in short-term tests < 0,1 mg/l for aquatic organisms
i	Dangerous for the ozone layer	Ozone Depletion Potential (ODP) > 0 *or* ozone-depleting substances regulated within EU

* The substance also fulfils this criterion if its log K_{ow} > 4, unless experimentally decided bioconcentration factor (BCF) < 1000

** For example: < 20% degradation in test for ready biodegradability (OECD 301 A-F) or in test for inherent biodegradability (OECD 302 A-C).

The List

The list includes groups of substances and single substances.

The groups of substances come first on the list. They have been assessed with regard to **danger for the environment** only. The assessment of danger for the environment refers to the groups of substances as such, with the exception of polycyclic aromatic hydrocarbons (PAH), which instead show the selection criteria for each single substance.

The **single substances** belonging to one of the groups of substances have been assessed with regard to **danger to human health** only (except for the substances belonging to the group of PAH). For such a single substance, note 1 under the heading “Selection criteria“ provides the information that the group to which the substance belongs has been assessed with regard to danger for the environment.

The other single substances (including substances belonging to the group of PAH) have been assessed with regard to danger for the environment **and/or** danger to human health.

Name **Synonym(s)** **CAS No**	**Selection criteria**	**Preparation types** (import/manufacture according to the Chemicals Inspectorate's Products Register)	**Number of preparations** (consumer prep. within brackets)	**Restrictions/ targets**
Groups of substances				
arsenic and arsenic compounds	g,h	wood preservative coatings intermediates, raw material reducing-oxidizing agents	21 (1)	KIFS 1990:10 KIFS 1992:7 Bill 1990/91:90 HELCOM
cadmium and cadmium compounds	g,h	paints (*artist's)*, fillers in plastics, paints etc. activators	169 (35)	SFS 1985:839 SFS 1985:840 SFS 1997:186 SFS 1997:645 Bill 1990/91:90 HELCOM OSPAR
chromium and chromium compounds	g,h	paints, varnishes dyestuffs, pigments wood preservative coatings	1399 (104)	SFS 1985:840 SFS 1997:186 KIFS 1989:2 KIFS 1990:10 KIFS 1992:7 Bill 1990/91:90 HELCOM
cobalt and cobalt compounds	g,h	intermediates, raw material paints, varnishes desiccators, drying agents	852 (259)	-
copper and copper compounds	g,h	alloy metals flotation agents dyestuffs, pigments	1456 (174)	SFS 1985:840 HELCOM

Danger to human health / *Properties*
- a Very high acute toxicity
- b Sensitising
- c High chronic toxicity
- d Impairs reproduction
- e Carcinogenic
- f Mutagenic

Danger for the environment / *Properties*
- g High potential for bioaccumulation combined with low degradability
  High potential for bioaccumulation combined with very high toxicity to aquatic organisms
  Low degradability combined with very high toxicity to aquatic organisms
- h Very high toxicity to aquatic organisms
- i Dangerous for the ozone layer

Name **Synonym(s)** **CAS No**	**Selection criteria**	**Preparation types** (import/manufacture according to the Chemicals Inspectorate's Products Register)	**Number of preparations** (consumer prep. within brackets)	**Restrictions/ targets**
cyanides	h	intermediates, raw material metal surface treatment agents de-icing agents	116 (9)	-
lead and lead compounds	g	intermediates, raw material electrolytes stabilizers	1172 (165)	SFS 1985:838 SFS 1985:840 SFS 1997:186 SFS 1997:645 KIFS 1992:7 Bill 1990/91:90 HELCOM
mercury and mercury compounds	g,h	dental products glazes, enamels etc. intermediates, raw material	53 (4)	SFS 1985:840 SFS 1991:1290 SFS 1997:186 SFS 1997:645 KIFS 1992:7 KIFS 1992:9 Bill 1993/94:163 HELCOM OSPAR
nickel and nickel compounds	g,h	alloy metals intermediates, raw material metal surface treatment agents	343 (21)	SFS 1985:840 KIFS 1992:7 HELCOM
polycyclic aromatic hydrocarbons (PAH) 130498-29-2		intermediates, raw material wood preservative coatings impregnating agents	17 (0)	KIFS 1992:7 HELCOM OSPAR
selenium and selenium compounds	g	dyestuffs, pigments alloy metals absorbents	76 (19)	-

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- i Dangerous for the ozone layer

Name **Synonym(s)** **CAS No**	**Selection criteria**	**Preparation types** (import/manufacture according to the Chemicals Inspectorate's Products Register)	**Number of preparations** (consumer prep. within brackets)	**Restrictions/ targets**
silver compounds	g,h	metal surface treatment agents catalysts intermediates, raw material	66 (1)	-
zinc and zinc compounds	g	insulating materials (heat-cold) paints, varnishes dyestuffs, pigments	3344 (639)	SFS 1985:840 HELCOM

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Low degradability combined with very high toxicity to aquatic organisms
h Very high toxicity to aquatic organisms
i Dangerous for the ozone layer

Name **Synonym(s)** **CAS No**	**Selection criteria**	**Preparation types** (import/manufacture according to the Chemicals Inspectorate's Products Register)	**Number of preparations** (consumer prep. within brackets)	**Restrictions/ targets**
Single substances				
acrylamide 79-06-1	c,e,f	intermediates, raw material precipitants paints, varnishes	53 (0)	SFS 1985:835 KIFS 1986:5 KIFS 1992:7
acrylonitrile 107-13-1	e	intermediates, raw material binders (paints, adhesives etc.) fillers in plastics, paints etc.	87 (6)	SFS 1985:835 KIFS 1986:5 KIFS 1992:7
allyl 2,3-epoxypropyl ether allyl glycidyl ether 106-92-3	b	intermediates, raw material	< 5	-
aluminum trisodium hexafluoride cryolite 15096-52-3	c	intermediates, raw material binders process regulators	29 (0)	SFS 1985:835 KIFS 1986:5
amines, polyethylenepoly- HEPA 68131-73-7	b	intermediates, raw material rust preventive agents paints, varnishes	5 (2)	-
4-aminobenzene-sulphonic acid sulphanilic acid 121-57-3	b	hardeners intermediates, raw material laboratory chemicals	6 (0)	-

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3-aminomethyl-3,5,5-trimethylcyclohexylamine isophorone diamine 2855-13-2	b	hardeners intermediates, raw material paints, varnishes	163 (21)	-
3-aminopropyl-dimethylamine N,N-dimethyl-1,3-diaminopropane 109-55-7	b	intermediates, raw material catalysts metal surface treatment agents	17 (3)	-
ammonia, anhydrous 7664-41-7	h	intermediates, raw material refrigerants metal surface treatment agents	383 (143)	-
ammonium dichromate 7789-09-5	a,b,e,f [1)]	metal surface treatment agents paints, varnishes laboratory chemicals	< 5	[2)]
amylas, α- 9000-90-2	b	cleaning agents catalysts food additives	41 (28)	-
anthracene (PAH) 120-12-7	g	cf. group of substances PAH	< 5	[2)]

[1)] The group of substances to which the substance belongs has been assessed with regard to danger for the environment. For groups of substances, see pages 17-19.

[2)] For restrictions/targets of the group of substances, see pages 17-19.

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Name **Synonym(s)** **CAS No**	**Selection criteria**	**Preparation types** (import/manufacture according to the Chemicals Inspectorate's Products Register)	**Number of preparations** (consumer prep. within brackets)	**Restrictions/ targets**
benzene 71-43-2	c,e	fuels, fuel oils intermediates, raw material adhesives	106 (45)	SFS 1985:835 SFS 1985:838 KIFS 1986:5 KIFS 1992:7
benzene-1,2,4-tricarboxylic-1,2-anhydride 1,2,4-benzenetricarboxylic acid 1,2-anhydride trimellitic anhydride 552-30-7	b	intermediates, raw material binders (paints, adhesives etc.)	< 5	-
1,2-benzisothiazol-3(2H)-one 2634-33-5	b	paints, varnishes binders adhesives	717 (226)	-
benzo[a]anthracene (PAH) 56-55-3	e,g,h	cf. group of substances PAH	< 5	KIFS 1992:7 [2)]
benzo[b]fluoranthene benzo[e]acephenanthrylene (PAH) 205-99-2	e	cf. group of substances PAH	< 5	KIFS 1992:7 [2)]
benzo[j]fluoranthene (PAH) 205-82-3	e	cf. group of substances PAH	< 5	KIFS 1992:7 [2)]
benzo[a]pyrene benzo[d,e,f]chrysene (PAH) 50-32-8	d,e,f,g,h	cf. group of substances PAH	10 (0)	KIFS 1992:7 [2)]

[2)] For restrictions/targets of the group of substances, see page 17-19.

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p-benzoquinone quinone 106-51-4	h	intermediates, raw material inhibitors fillers in plastics, paints etc.	24 (1)	-
benzothiazole-2-thiol 2(3H)-benzothiazolethione 149-30-4	b	accelerators intermediates, raw material de-icing agents	31 (0)	-
2,2-bis(acryloyloxy-methyl)butyl acrylate trimethylolpropane triacrylate 15625-89-5	b	paints, varnishes binders (other products) binders (paints, adhesives etc.)	67 (0)	-
1,1-bis(tert-butylperoxy)-3,5,5-trimethylcyclohexane 6731-36-8	g	vulcanizing agents hardeners	< 5	-
1,4-bis(2,3-epoxy-propoxy)butane 1,4-butanedioldiglycidyl ether 2425-79-8	b	adhesives insulating materials (electricity) binders	36 (0)	-
bis[4-(2,3-epoxypropoxy) phenyl]propane bisphenol A diglycidyl ether 1675-54-3	b	binders (paints, adhesives etc.) paints, varnishes floor covering materials	242 (25)	-
N,N-bis(2-ethylhexyl)-((1,2,4-triazol-1-yl)methyl)amine 91273-04-0	b	inhibitors lubricants	< 5	-

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bis(hydroxylammonium) sulphate hydroxylamine sulphate 10039-54-0	b	process regulators stabilizers laboratory chemicals	58 (5)	-
bisphenol A-(epichlorhydrin), reaction product epoxy resin (number average molecular weight ≤ 700) 25068-38-6	b	paints, varnishes intermediates, raw material binders (paints, adhesives etc.)	599 (45)	-
boron trifluoride 7637-07-2	a	intermediates, raw material	< 5	SFS 1985:835 KIFS 1986:5
bromine 7726-95-6	a	intermediates, raw material laboratory chemicals adhesives	< 5	SFS 1985:835 KIFS 1986:5
bromomethane methyl bromide 74-83-9	i	intermediates, raw material pesticides	< 5	Bill 1995/96:120
1,3-butadiene buta-1,3-diene 106-99-0	e	intermediates, raw material welding products polishing agents	32 (1)	SFS 1985:835 KIFS 1986:5 KIFS 1992:7
2-butanone oxime ethyl methyl ketone oxime ethyl methyl ketoxime 96-29-7	b	paints, varnishes fillers in plastics, paints etc. solvents	651 (283)	-

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n-butyl acrylate 141-32-2	b	intermediates, raw material paints, varnishes jointing materials	220 (44)	-
2-tert-butylaminoethyl methacrylate 3775-90-4	b	adhesives binders (paints, adhesives etc.) intermediates, raw material	5 (0)	-
butyl hydroxytoluene BHT 128-37-0	g	stabilizers insulating materials (electricity) intermediates, raw material	245 (17)	-
n-butyl methacrylate 97-88-1	b	intermediates, raw material dyestuffs, pigments binders (paints, adhesives etc.)	56 (11)	-
captan (ISO) 1,2,3,6-tetrahydro-N-(trichloro-methylthio)phthalimide 133-06-2	b	pesticides paints, varnishes	< 5	-
carbendazim (ISO) [3)] methyl benzimidazole-2-ylcarbamate 10605-21-7	d,g	preservatives paints, varnishes jointing materials	75 (43)	SFS 1985:835 KIFS 1986:5

[3)] The substance is not included in the Regulations KIFS 1994:12, but has been assigned a proposed classification within the EU which fulfils the criteria for danger to human health in the Observation List.

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Name **Synonym(s)** **CAS No**	**Selection criteria**	**Preparation types** (import/manufacture according to the Chemicals Inspectorate's Products Register)	**Number of preparations** (consumer prep. within brackets)	**Restrictions/ targets**
carbon disulphide 75-15-0	c	process regulators laboratory chemicals	< 5	SFS 1985:835 KIFS 1986:5
carbon monoxide 630-08-0	c,d	fuels, fuel oils intermediates, raw material reducing-oxidizing agents	7 (3)	SFS 1985:835 KIFS 1986:5
carbon tetrachloride tetrachloromethane 56-23-5	c,i	laboratory chemicals intermediates, raw material	30 (8)	SFS 1985:835 SFS 1995:636 SNFS 1997:8 KIFS 1986:5 KIFS 1992:7 HELCOM
CD-4 [3)] N^5-ethyl-N^5-(2-hydroxyethyl)toluene-2,5-diammonium sulphate 25646-77-9	b	laboratory chemicals developers	37 (9)	-
cellulase 9012-54-8	b	catalysts cleaning agents textile colouring agents	7 (4)	-
chloramine T (sodium salt) sodium N-chloro-4-toluenesulfonamide 127-65-1	b	cleaning agents	7 (4)	-
chlorine 7782-50-5	h	cleaning agents bleaching agents intermediates, raw material	11 (0)	-

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- a Very high acute toxicity
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- e Carcinogenic
- f Mutagenic

Danger for the environment / *Properties*
- g High potential for bioaccumulation combined with low degradability
  High potential for bioaccumulation combined with very high toxicity to aquatic organisms
  Low degradability combined with very high toxicity to aquatic organisms
- h Very high toxicity to aquatic organisms
- i Dangerous for the ozone layer

Name **Synonym(s)** **CAS No**	**Selection criteria**	**Preparation types** (import/manufacture according to the Chemicals Inspectorate's Products Register)	**Number of preparations** (consumer prep. within brackets)	**Restrictions/ targets**
2-chloroacetamide [3)] 79-07-2	b	adhesives fixing agents cleaning agents	55 (8)	-
chloroacetic acid 79-11-8	h	intermediates, raw material	< 5	-
chloroalkanes, C10-13 paraffin waxes, chlorinated 85535-84-8	g	plasticizers (plastics, rubbers, paints etc.) fire prevention additive cutting fluids	44 (7)	Bill 1990/91:90 OSPAR
4-chloro-m-cresol 4-chloro-3-methylphenol 59-50-7	b,g,h	adhesives preservatives cutting fluids	41 (13)	-
1-chloro-1,1-difluoroethane HCFC-142b 75-68-3	i	blowing agents intermediates, raw material cleaning agents	< 5	SFS 1995:636 SNFS 1997:8
chlorodifluoromethane HCFC-22 75-45-6	i	refrigerants jointing materials blowing agents	46 (10)	SFS 1995:636 SNFS 1997:8
1-chloro-2,3-epoxypropane (chloromethyl)oxirane epichlorhydrin 106-89-8	b,e	intermediates, raw material precipitants paper manufacture chemicals	34 (0)	SFS 1985:835 KIFS 1986:5 KIFS 1992:7

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  Low degradability combined with very high toxicity to aquatic organisms
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Name **Synonym(s)** **CAS No**	**Selection criteria**	**Preparation types** (import/manufacture according to the Chemicals Inspectorate's Products Register)	**Number of preparations** (consumer prep. within brackets)	**Restrictions/ targets**
5-chloro-2-methyl-2H-isothiazolin-3-one [6] 5-chloro-2-methyl-4-isothiazolin-3-one 26172-55-4	b	preservatives paints, varnishes binders (paints, adhesives etc.)	1780 (510)	-
3-chloropropene allyl chloride 107-05-1	a	intermediates, raw material precipitants	< 5	SFS 1985:835 KIFS 1986:5
chlorothalonil (ISO) tetrachloro isophthalonitrile 1897-45-6	g	paints, varnishes preservatives	25 (15)	-
chromium trioxide 1333-82-0	b,e[1)]	wood preservative coatings metal surface treatment agents intermediates, raw material	124 (0)	SFS 1985:835 KIFS 1986:5 KIFS 1992:7 [2)]
chrysene (PAH) 218-01-9	g,h	cf. group of substances PAH	< 5	[2)]

[1)] The group of substances to which the substance belongs has been assessed with regard to danger for the environment. For groups of substances, see pages 17-19.

[2)] For restrictions/targets of the group of substances, see pages 17-19.

[6)] The substance is not included in the Regulations KIFS 1994:12. 5-Chloro-2-methyl-2H-isothiazoline-3-one occurs in combination with 2-methyl-4-isothiazolin-3-one.

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Name **Synonym(s)** **CAS No**	**Selection criteria**	**Preparation types** (import/manufacture according to the Chemicals Inspectorate's Products Register)	**Number of preparations** (consumer prep. within brackets)	**Restrictions/ targets**
C.I. Mordant Black 11 3-hydroxy-4-[(1-hydroxy-2-naphthalenyl)azo]-7-nitro-1-naphthalene sulphonic, sodium salt 1787-61-7	g	dyestuffs, pigments laboratory chemicals	< 5	-
C.I. Pigment Red 104 (this substance is identified in the Colour Index by Colour Index Constitution Number C.I. 77605) 12656-85-8	d [1)]	dyestuffs, pigments paints, varnishes stabilizers	163 (8)	[2)]
C.I. Pigment Yellow 34 (this substance is identified in the Colour Index by Colour Index Constitution Number C.I. 77603) 1344-37-2	d [1)]	dyestuffs, pigments paints, varnishes intermediates, raw material	240 (15)	[2)]
clarified oils (petroleum), catalytic cracked 64741-62-4	e	asphalt, bitumen, tar etc.	< 5	SFS 1985:835 KIFS 1986:5
coal tar 8007-45-2	e	intermediates, raw material asphalt, bitumen, tar etc. impregnating agents	43 (7)	-

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[2)] For restrictions/targets of the group of substances, see pages 17-19.

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Name **Synonym(s)** **CAS No**	**Selection criteria**	**Preparation types** (import/manufacture according to the Chemicals Inspectorate's Products Register)	**Number of preparations** (consumer prep. within brackets)	**Restrictions/ targets**
cobalt 7440-48-4	b [1)]	intermediates, raw material alloy metals accelerators	89 (5)	[2)]
cobalt oxide 1307-96-6	b [1)]	catalysts glazes, enamels etc. dyestuffs, pigments	15 (1)	[2)]
coco alkylamine 61788-46-3	h	intermediates, raw material flotation agents hardeners	11 (0)	-
creosote 8001-58-9	g,h	wood preservative coatings absorbents asphalt, bitumen, tar etc.	< 5	KIFS 1990:10 KIFS 1992:7 Bill 1990/91:90
cyanamide carbamonitril 420-04-2	b	intermediates, raw material	< 5	-
cyclohexane-1,2-dicarboxylic anhydride hexahydrophthalic anhydride 85-42-7	b	intermediates, raw material hardeners jointing materials	7 (0)	AFS 1996:2

[1)] The group of substances to which the substance belongs has been assessed with regard to danger for the environment. For groups of substances, see pages 17-19.

[2)] For restrictions/targets of the group of substances, see pages 17-19.

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cyclohex-4-ene-1,2-dicarboxylic anhydride tetrahydrophthalic anhydride 85-43-8	b	intermediates, raw material	< 5	AFS 1996:2
cyclohexylthiophthal-imide 17796-82-6	g	inhibitors intermediates, raw material	< 5	-
decabromodi-phenyl ether 1,1'-oxybis(2,3,4,5,6-pentabromobenzene) bis(pentabromophenyl) ether 1163-19-5	g	fire prevention additive intermediates, raw material jointing materials	13 (0)	Bill 1990/91:90
4,4'-diaminodi-phenylmethane 4,4'-methylenedianiline 101-77-9	b,e	hardeners paints, varnishes vulcanizing agents	30 (1)	SFS 1985:835 AFS 1996:2 KIFS 1986:5 KIFS 1992:7
1,2-diaminoethane ethylenediamine 107-15-3	b	intermediates, raw material metal surface treatment agents hardeners	107 (27)	-

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diammonium peroxydisulphate [3] ammonium persulphate 7727-54-0	b	intermediates, raw material catalysts reducing-oxidizing agents	8 (0)	-
diarsenic trioxide arsenic trioxide 1327-53-3	a,e [1]	intermediates, raw material raw material (glass, ceramics)	5 (0)	SFS 1985:835 KIFS 1986:5 KIFS 1992:7 [2]
3,6-diazaoctane-1,8-diamine triethylenetetramine 112-24-3	b	intermediates, raw material hardeners adhesives	98 (10)	-
dibenzofurane 132-64-9	g	intermediates, raw material	< 5	-
dibenzoyl peroxide benzoyl peroxide 94-36-0	b	hardeners jointing materials car care products	95 (11)	-
dibenzyltoluene dibenzylmethylbenzene 26898-17-9	g	insulating materials (electricity) dental products jointing materials	7 (0)	-

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[2] For restrictions/targets of the group of substances, see pages 17-19.

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  High potential for bioaccumulation combined with very high toxicity to aquatic organisms
  Low degradability combined with very high toxicity to aquatic organisms
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Name **Synonym(s)** **CAS No**	**Selection criteria**	**Preparation types** (import/manufacture according to the Chemicals Inspectorate's Products Register)	**Number of preparations** (consumer prep. within brackets)	**Restrictions/ targets**
1,2-dibromoethane 106-93-4	e	intermediates, raw material fuels, fuel oils fuel additives	< 5	SFS 1985:835 AFS 1996:2 KIFS 1986:5
dibutyl phthalate 84-74-2	h	plasticizers (plastics, rubbers, paints etc.) adhesives jointing materials	275 (33)	Bill 1990/91:90
dibutyltin oxide 818-08-6	g	stabilizers intermediates, raw material jointing materials	8 (1)	Bill 1990/91:90
dichlofluanide (ISO) N-dichlorofluoromethylthio-N',N'-dimethyl-N-phenylsulphamide 1085-98-9	b,h	paints, varnishes preservatives pesticides	58 (29)	-
dichlorodifluoromethane CFC-12 75-71-8	i	refrigerants jointing materials cutting fluids	7 (1)	SFS 1995:636 SNFS 1997:8
1,2-dichloroethane ethylene dichloride 107-06-2	e	intermediates, raw material laboratory chemicals adhesives	12 (0)	SFS 1985:835 KIFS 1986:5 KIFS 1992:7 HELCOM
1,1-dichloro-1-fluoroethane HCFC-141b 1717-00-6	i	intermediates, raw material insulating materials (heat-cold) anti-adhesive agents	25 (0)	SFS 1995:636 SNFS 1997:8

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2,2'-dichloro-4,4'-methylenedianiline 4,4'-methylenebis(2-chloroaniline) 101-14-4	e,g	vulcanizing agents	< 5	SFS 1985:835 AFS 1996:2 KIFS 1986:5 KIFS 1992:7
1,3-dichloro-2-propanol 96-23-1	e	adhesives paper manufacture chemicals emulsifiers	7 (0)	SFS 1985:835 KIFS 1986:5 KIFS 1992:7
dicocoalkyldimethyl-ammonium chloride 61789-77-3	g	flotation agents rinsing agents thickeners	15 (2)	-
di-tert-dodecylpentasulphide 31565-23-8	g	cutting fluids rust preventives	9 (1)	-
diethylene glycol dinitrate 693-21-0	a	explosives	6 (6)	SFS 1985:835 KIFS 1986:5
di(hydrogenated tallowalkyl) dimethylammonium chloride DHTDMAC 61789-80-8	g,h	plasticizers intermediates, raw material flotation agents	16 (5)	OSPAR
1,4-dihydroxybenzene hydroquinone 123-31-9	b,h	developers laboratory chemicals intermediates, raw material	390 (62)	-

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- g High potential for bioaccumulation combined with low degradability
  High potential for bioaccumulation combined with very high toxicity to aquatic organisms
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Name **Synonym(s)** **CAS No**	**Selection criteria**	**Preparation types** (import/manufacture according to the Chemicals Inspectorate's Products Register)	**Number of preparations** (consumer prep. within brackets)	**Restrictions/ targets**
diisodecyl phenylphosphite 25550-98-5	g	stabilizers pesticides	6 (0)	-
diisopropylnaphthalene 38640-62-9	g	plasticizers laboratory chemicals floor covering materials	14 (0)	-
dimethyldistearyl-ammonium chloride DSDMAC 107-64-2	g,h	cleaning agents rinsing agents plasticizers	13 (1)	Bill 1993/94:163 OSPAR
dimethylditallowalkyl-ammonium chloride DTDMAC 68783-78-8	g,h	jointing materials plasticizers car care products	23 (2)	OSPAR
N,N-dimethylformamide dimethyl formamide 68-12-2	d	solvents binders adhesives	40 (1)	SFS 1985:835 KIFS 1986:5 KIFS 1992:7
dimethyl sulphate 77-78-1	a,e	intermediates, raw material	< 5	SFS 1985:835 AFS 1996:2 KIFS 1986:5 KIFS 1992:7
diphenylamine 122-39-4	g,h	explosives stabilizers intermediates, raw material	33 (2)	-
diphenylmethane-2,4'-diisocyanate 5873-54-1	b	intermediates, raw material hardeners	24 (0)	-

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High potential for bioaccumulation combined with very high toxicity to aquatic organisms
Low degradability combined with very high toxicity to aquatic organisms
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diphenylmethane-4,4'-diisocyanate 101-68-8	b	intermediates, raw material binders jointing materials	223 (46)	-
diphenylmethanedi-isocyanate, isomers and homologues 9016-87-9	b	intermediates, raw material hardeners insulating materials (heat-cold)	106 (6)	-
diphenyl oxide diphenyl ether 101-84-8	g	intermediates, raw material heat transferring agents	< 5	-
N,N'-diphenyl-p-phenylendiamine N,N'-diphenyl-1,4-benzenediamine 74-31-7	g	intermediates, raw material	< 5	-
distillates (petroleum), acid-treated light naphthenic 64742-19-4	e	stabilizers	< 5	SFS 1985:835 KIFS 1986:5
distillates (petroleum), chemically neutralized light naphthenic 64742-35-4	e	paints, varnishes	< 5	SFS 1985:835 KIFS 1986:5
distillates (petroleum), heavy naphthenic 64741-53-3	e	fuels, fuel oils binders asphalt, bitumen, tar etc.	52 (11)	SFS 1985:835 KIFS 1986:5

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distillates (petroleum), hydrodesulphurized light catalytic cracked 68333-25-5	e	fuels, fuel oils	8 (8)	-
distillates (petroleum), light catalytic cracked 64741-59-9	e	fuels, fuel oils	< 5	-
distillates (petroleum), light naphthenic 64741-52-2	e	cutting fluids lubricants intermediates, raw material	< 5	SFS 1985:835 KIFS 1986:5
distillates (petroleum), light vacuum 70592-77-7	e	fuels, fuel oils	< 5	-
diuron (ISO) (3-(3,4-dichlorophenyl)-1,1-dimethylurea) 330-54-1	g,h	preservatives paints, varnishes adhesives	24 (10)	-
1-dodecanol n-lauryl alcohol 112-53-8	g	lubricants cutting fluids fire exstinguishing agents	18 (3)	-
dodecylphenol 27193-86-8	g,h	fuels, fuel oils lubricants fuel additives	20 (4)	-
1-dodecyl-2-pyrrolidone 2687-96-9	b	intermediates, raw material	< 5	-

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2,3-epoxypropyl methacrylate glycidyl methacrylate 106-91-2	b	intermediates, raw material hardeners	< 5	-
1,2-epoxy-3-(tolyloxy)propane cresyl glycidyl ether 26447-14-3	b	binders (paints, adhesives etc.) diluents (paints etc.) floor covering materials	22 (0)	-
2-ethoxyethanol ethylene glycol monoethyl ether 110-80-5	d	fire extinguishing agents paints, varnishes hardeners	50 (9)	SFS 1985:835 KIFS 1986:5 KIFS 1992:7
2-ethoxyethyl acetate ethylene glycol monoethylether acetate 111-15-9	d	paints, varnishes hardeners solvents	47 (3)	SFS 1985:835 KIFS 1986:5 KIFS 1992:7
ethyl acrylate 140-88-5	b	intermediates, raw material binders (paints, adhesives etc.) binders (other products)	49 (6)	-
ethylene dimethacrylate [3)] ethylene glycol dimethacrylate 97-90-5	b	intermediates, raw material dental products floor covering materials	8 (0)	-
ethylene dinitrate ethylene glycol dinitrate 628-96-6	a	explosives	< 5	SFS 1985:835 KIFS 1986:5

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ethylene oxide oxirane 75-21-8	e,f	intermediates, raw material cleaning agents antifoaming agents	22 (0)	SFS 1985:835 KIFS 1986:5 KIFS 1992:7
ethylene thiourea 2-imidazolinethione 96-45-7	d	accelerators intermediates, raw material	10 (0)	SFS 1985:835 AFS 1996:2 KIFS 1986:5 KIFS 1992:7
2-ethylhexyl acrylate 103-11-7	b	intermediates, raw material floor covering materials paints, varnishes	66 (9)	-
fluoranthene (PAH) 206-44-0	g,h	cf. group of substances PAH	< 5	2)
fluorine 7782-41-4	a	intermediates, raw material	8 (0)	SFS 1985:835 KIFS 1986:5
formaldehyde 50-00-0	b 5)	intermediates, raw material binders fillers (plastics, paints etc.)	1372 (209)	AFS 1996:4 KIFS 1989:5
formaldehyde, reaction product with butylphenol 91673-30-2	b	insulating materials (electricity)	< 5	-

2) For restrictions/targets of the group of substances, see pages 17-19.

5) The assessment of formaldehyde refers to the substance in aqueous solution at the concentration ò 0.2%.

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fuel oil, residual 68476-33-5	e	fuels, fuel oils	12 (3)	-
fuel oil, residues, straight-run gas oils, high sulphur 68476-32-4	e	fuels, fuel oils	9 (0)	-
gas oils (petroleum), hydrodesulphurized heavy vacuum 64742-86-5	e	fuels, fuel oils	< 5	-
gas oils (petroleum), steam-cracked 68527-18-4	e	emulsion breakers	< 5	SFS 1985:835 KIFS 1986:5
glutaraldehyde 1,5-pentanedial 111-30-8	b	pesticides preservatives dyestuffs, pigments	85 (7)	-
glycerol trinitrate nitroglycerine 55-63-0	a	explosives intermediates, raw material	22 (0)	SFS 1985:835 KIFS 1986:5
glycidyl(C12-14)alkyl ether [3)] 39390-62-0	b	diluents paints, varnishes insulating materials (heat-cold)	28 (11)	-
1,2,5,6,9,10-hexabromocyclododecane HBCD 3194-55-6	g,h	fire prevention additive intermediates, raw material finishing agents	9 (0)	-

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hexachloro-1,3-butadiene 87-68-3	g,h	intermediates, raw material	< 5	HELCOM
hexachloroethane 67-72-1	g	intermediates, raw material absorbents	< 5	KIFS 1992:7 OSPAR
hexahydromethylphthalic anhydride [3)] 25550-51-0	b	hardeners mortar, finishing mortar	7 (1)	AFS 1996:2
hexahydro-1,3,5-tris(hydroxyethyl)triazin [3)] 1,3,5-triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	b	preservatives cutting fluids cleaning agents	189 (17)	-
hexamethylene diacrylate 1,6-hexanediol diacrylate 13048-33-4	b	paints, varnishes intermediates, raw material solvents	84 (0)	-
hexamethylene diisocyanate 822-06-0	b	hardeners paints, varnishes intermediates, raw material	146 (11)	-
hydrazine 302-01-2	b,e	pH-regulating agents inhibitors carbonization agents	5 (0)	SFS 1985:835 AFS 1996:2 KIFS 1986:5 KIFS 1992:7

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Danger to human health / *Properties*
- a Very high acute toxicity
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- c High chronic toxicity
- d Impairs reproduction
- e Carcinogenic
- f Mutagenic

Danger for the environment / *Properties*
- g High potential for bioaccumulation combined with low degradability
  High potential for bioaccumulation combined with very high toxicity to aquatic organisms
  Low degradability combined with very high toxicity to aquatic organisms
- h Very high toxicity to aquatic organisms
- i Dangerous for the ozone layer

Name **Synonym(s)** **CAS No**	**Selection criteria**	**Preparation types** (import/manufacture according to the Chemicals Inspectorate's Products Register)	**Number of preparations** (consumer prep. within brackets)	**Restrictions/ targets**
hydrofluoric acid **hydrogen fluoride** 7664-39-3	a [4)]	metal surface treatment agents intermediates, raw material etching agents for glass	98 (3)	SFS 1985:835 KIFS 1986:5
hydrogen sulphide 7783-06-4	a,h	fuels, fuel oils laboratory chemicals diluent (paints etc.)	7 (0)	SFS 1985:835 KIFS 1986:5
2-hydroxyethyl acrylate 818-61-1	b	paints, varnishes binders (paints, adhesives etc.) intermediates, raw material	38 (0)	-
2-hydroxyethyl methacrylate 868-77-9	b	paints, varnishes intermediates, raw material binders (paints, adhesives etc.)	41 (2)	-
2-hydroxypropyl methacrylate 923-26-2	b	paints, varnishes intermediates, raw material adhesives	7 (0)	-

[4)] The assessment of hydrofluoric acid refers to the substance in aqueous solution at the concentration of ò 7%.
The assessment of hydrogen fluoride refers to the substance as such.

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2,2-iminodiethanol-6-methyl-2-[4-(2,4,6-triaminopyrimidine-5-ylazo)phenyl]benzotiazol-7-sulphonate and N,N-diethyl-propane-1,3-diamine-6-methyl-2-[4-(2,4,6-triamino-pyrimidine-5-ylazo) phenyl]benzotiazol-7-sulphonate and 2-methyl-aminoethanol-6-methyl-2-[4-(2,4,6-triamino-pyrimidine-5-ylazo)phenyl]-benzotiazol-7-sulphonate C.I. Direct Yellow 166 114565-65-0	b	dyestuffs, pigments	< 5	-
2,2'-iminodiethylamine 3-azapentane-1,5-diamine diethylenetriamine 111-40-0	b	intermediates, raw material surfactants hardeners	84 (6)	-
3,3'-iminodipropylamine 4-azaheptane-1,7-diamine dipropylenetriamine 56-18-8	a,b	hardeners wetting agents paints, varnishes	7 (3)	SFS 1985:835 KIFS 1986:5
isobutyl methacrylate 97-86-9	b	intermediates, raw material paints, varnishes fillers (plastics, paints etc.)	21 (4)	-
3-isocyanatomethyl-3,5,5-trimethylcyclo-hexylisocyanate isophorone diisocyanate 4098-71-9	b	hardeners paints, varnishes mortar, finishing mortar	42 (12)	-

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4,4'-isopropylidenedi-phenol bisphenol A 80-05-7	b	intermediates, raw material hardeners stabilizers	107 (10)	-
lead chromate 7758-97-6	d [1)]	paints, varnishes dyestuffs, pigments	46 (6)	KIFS 1992:7 [2)]
maleic anhydride 108-31-6	b	intermediates, raw material paints, varnishes wetting agents	34 (0)	-
(R)-p-mentha-1,8-diene [3)] 5989-27-5	b,g	cleaning agents wetting agents solvents	68 (21)	-
methacrylonitrile 2-methyl-2-propene nitrile 126-98-7	b	intermediates, raw material fillers (plastics, paints etc.) metal surface treatment agents	< 5	-
methenamine 100-97-0	b	intermediates, raw material binders hardeners	82 (3)	-

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[2)] For restrictions/targets of the group of substances, see pages 17-19.

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Name **Synonym(s)** **CAS No**	**Selection criteria**	**Preparation types** (import/manufacture according to the Chemicals Inspectorate's Products Register)	**Number of preparations** (consumer prep. within brackets)	**Restrictions/ targets**
2-methoxyethanol ethylene glycol monomethyl ether 109-86-4	d	solvents photoresists hardeners	26 (0)	SFS 1985:835 KIFS 1986:5 KIFS 1992:7
6-methyl-2,4-bis(methylthio)phenylene-1,3-diamine 106264-79-3	b	intermediates, raw material	< 5	-
methylcyclohexane 108-87-2	g	intermediates, raw material solvents paints, varnishes	17 (3)	-
4,4'-methylene-di(cyclohexyl isocyanate) dicyclohexylmethane-4,4'-diisocyanate 5124-30-1	b	intermediates, raw material paints, varnishes jointing materials	8 (2)	-
methylene dithiocyanate 6317-18-6	b	paper manufacture chemicals adhesives water-repelling agents	12 (0)	-
methyl methacrylate 80-62-6	b	intermediates, raw material floor covering materials binders (paints, adhesives etc.)	297 (39)	-
1,5-naphthalene diisocyanate 3173-72-6	b	intermediates, raw material	< 5	-

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Name **Synonym(s)** **CAS No**	**Selection criteria**	**Preparation types** (import/manufacture according to the Chemicals Inspectorate's Products Register)	**Number of preparations** (consumer prep. within brackets)	**Restrictions/ targets**
nickel 7440-02-0	b [1)]	alloy metals metal surface treatment agents intermediates, raw material	60 (2)	KIFS 1992:7 HELCOM [2)]
nickel dihydroxide 12054-48-7	b [1)]	intermediates, raw material	< 5	[2)]
nickel monoxide 1313-99-1	b,e [1)]	catalysts process regulators intermediates, raw material	24 (1)	SFS 1985:835 KIFS 1986:5 KIFS 1992:7 [2)]
nickel sulphate 7786-81-4	b [1)]	intermediates, raw material metal surface treatment agents photoresists	27 (0)	[2)]
nonylphenol 25154-52-3 and other CAS Nos.	g	intermediates, raw material stabilizers hardeners	81 (9)	OSPAR
nonylphenol ethoxylate nonylphenolpolyglycol ether 9016-45-9 and other CAS Nos.	g	surfactants binders (paints, adhesives etc.) emulsifiers	387 (34)	Bill 1990/91:90 OSPAR

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octane 111-65-9	g	intermediates, raw material paints, varnishes cleaning agents	13 (3)	-
2-octyl-2H-isothiazol-3-one [3)] 2-n-octyl-3-isothiazolone 26530-20-1	b	rinsing agents paints, varnishes preservatives	131(70)	-
p-tert-octylphenol 4-(1,1,3,3-tetramethylbutyl)phenol 140-66-9	g	intermediates, raw material vulcanizing agents fillers (plastics, paints etc.)	6 (0)	-
pentachloroethane 76-01-7	c	intermediates, raw material	< 5	SFS 1985:835 KIFS 1986:5 KIFS 1992:7
pentaerythritol tetraacrylate 4986-89-4	b	binders (paints, adhesives etc.) paints, varnishes	< 5	-
pentaerythritol triacrylate 3524-68-3	b	binders (paints, adhesives etc.) paints, varnishes	5 (0)	-
petroleum crude oil 8002-05-9	e	intermediates, raw material	21 (9)	SFS 1985:835 KIFS 1986:5

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petroleum, solvent extract of heavy naphthenic distillate 64742-11-6	e	hardeners intermediates, raw material jointing materials	8 (3)	SFS 1985:835 KIFS 1986:5 KIFS 1992:7
petroleum, solvent extract of heavy paraffinic distillate 64742-04-7	e	binders intermediates, raw material plasticizers (plastics, rubbers, paints etc.)	20 (0)	SFS 1985:835 KIFS 1986:5 KIFS 1992:7
petroleum, solvent extract of light naphthenic distillate 64742-03-6	e	cleaning agents metal surface treatment agents paints, varnishes	< 5	SFS 1985:835 KIFS 1986:5 KIFS 1992:7
petroleum, solvent extract of light paraffinic distillate 64742-05-8	e	vulcanizing agents adhesives binders	21 (0)	SFS 1985:835 KIFS 1986:5 KIFS 1992:7
phenanthrene (PAH) 85-01-8	g,h	cf. group of substances PAH	< 5	[2]
phthalic anhydride [3] 85-44-9	b	intermediates, raw material hardeners	75 (5)	-
piperazine 110-85-0	b	intermediates, raw material hardeners adhesives	8 (0)	-

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pitch, coal tar, high temperature 65996-93-2	e	intermediates, raw material jointing materials cement	9 (0)	SFS 1985:835 KIFS 1986:5
potassium dichromate 7778-50-9	a, b,e,f [1)]	intermediates, raw material metal surface treatment agents laboratory chemicals	19 (2)	[2)]
propylene oxide 1,2-epoxypropane methyloxirane 75-56-9	e	intermediates, raw material binders (paints, adhesives etc.) car care products	13 (1)	SFS 1985:835 KIFS 1986:5 KIFS 1992:7
propyl 3,4,5-trihydroxybenzoate 121-79-9	b	stabilizers lubricants transmission media	8 (1)	-
proxan-sodium sodium isopropylxanthate 140-93-2	h	flotation agents	< 5	-
pyrene (PAH) 129-00-0	g,h	cf. group of substances PAH	< 5	[2)]
residues (petroleum), atmospheric tower 64741-45-3	e	fuels, fuel oils	8 (0)	-

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residues (petroleum), catalytic, cracking 92061-97-7	e	fuels, fuel oils	< 5	-
residues (petroleum), steam-cracked, resinous 68955-36-2	e	binders (paints, adhesives etc.)	< 5	SFS 1985:835 KIFS 1986:5
residues (petroleum), thermal cracked 64741-80-6	e	fuels, fuel oils	< 5	-
residues, steam-cracked, thermally treated 98219-64-8	e	fuels, fuel oils	< 5	-
rosin colophony 8050-09-7	b	adhesives binders (paints, adhesives etc.) paints, varnishes	184 (48)	-
rosin colophony 8052-10-6	b	intermediates, raw material adhesives paper manufacture chemicals	47 (11)	-
rosin colophony 73138-82-6	b	adhesives dyestuffs, pigments	< 5	-
sodium chlorate 7775-09-9	h	reducing-oxidizing agents bleaching agents metal surface treatment agents	24 (1)	-

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sodium chloroacetate 3926-62-3	h	intermediates, raw material surfactants	9 (1)	-
sodium dichromate 10588-01-9	a,b,e,f [1)]	flotation agents metal surface treatment agents bleaching agents	25 (1)	[2)]
sodium dichromate, dihydrate 7789-12-0	a,b,e,f [1)]	wood preservative coatings process regulators metal surface treatment agents	15 (0)	[2)]
sodium n-dodecyl-benzenesulfonate n-dodecylbenzenesulfonic acid, sodium salt linear C12 alkylbenzene sulphonate, sodium salt 25155-30-0	g	cleaning agents industrial odour agents pesticides	141 (35)	-
sodium 3-nitrobenzenesulphonate 127-68-4	b	reducing-oxidizing agents metal surface treatment agents etching agents for glass	32 (2)	-
strontium chromate 7789-06-2	e [1)]	paints, varnishes dyestuffs, pigments rust preventives	54 (0)	KIFS 1992:7 [2)]

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subtilisin 9014-01-1	b	cleaning agents tanning agents catalysts	59 (28)	-
terphenyl, hydrogenated 61788-32-7	h	heat-transferring agents adhesives transmission media	12 (0)	-
3,6,9,12-tetraazatetradecane-1,14-diamine pentaethylenehexamine 4067-16-7	b	intermediates, raw material hardeners metal surface treatment agents	19 (3)	-
tetrabromobisphenol A 4,4'-isopropylidenebis(2,6-dibromophenol) 79-94-7	g,h	fire prevention additive intermediates, raw material adhesives	5 (0)	-
1,1,2,2-tetrachloroethane 79-34-5	a	intermediates, raw material	< 5	SFS 1985:835 KIFS 1986:5 KIFS 1992:7
1,2,3,6-tetrahydromethyl phthalic anhydride [3)] 26590-20-5	b	hardeners	7 (0)	AFS 1996:2
N,N',N'',N'''-tetrakis(4,6-bis(butyl-(N-methyl-2,2,6,6-tetramethylpiperidine-4-yl)amino)triazin-2-yl)-4,7-diazadecane-1,10-diamine 106990-43-6	b	stabilizers dyestuffs, pigments	< 5	-

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tetramethylthiuram monosulphide [3)] 97-74-5	b	accelerators intermediates, raw material adhesives	7 (0)	-
tetrasodium 4-amino-5-hydroxy-6-[3-[2-[2-(sulfonatooxy) ethylsulphonyl] ethylcarbamoyl] phenylazo]-3-[4-[2-(sulfonatooxy) ethylsulphonyl]phenylazo] naphthalene-2,7-disulphonate 116889-78-2	b	dyestuffs, pigments	< 5	-
thiram tetramethylthiuram disulphide 137-26-8	b,g,h	accelerators vulcanizing agents intermediates, raw material	24 (0)	-
tin(II)methane sulphonate 53408-94-9	b	metal surface treatment agents	< 5	-
toluene-2,4-diisocyanate 584-84-9	a,b,e	intermediates, raw material binders (paints, adhesives etc.) hardeners	79 (11)	SFS 1985:835 KIFS 1986:5
toluene-2,6-diisocyanate 91-08-7	a,b,e	intermediates, raw material hardeners rust preventives	18 (0)	SFS 1985:835 KIFS 1986:5

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4-toluenesulfonyl isocyanate tosyl isocyanate 4083-64-1	b	intermediates, raw material adhesives floor covering materials	25 (1)	-
o-toluidine 95-53-4	e	intermediates, raw material metal surface treatment agents	< 5	SFS 1985:835 KIFS 1986:5 KIFS 1992:7
3,6,9-triazaundecane-1,11-diamine tetraethylenepentamine 112-57-2	b	intermediates, raw material emulsifiers adhesives	38 (2)	-
1,1,1-trichloroethane methyl chloroform 71-55-6	i	cleaning agents adhesives lubricants	51 (6)	SFS 1995:636 SNFS 1997:8 KIFS 1992:7 HELCOM
N-(trichloromethylthio) phthalimide folpet 133-07-3	b	paints, varnishes preservatives pesticides	19 (13)	-
1,1,2-trichloro-1,2,2-trifluoroethane CFC-113 76-13-1	i	laboratory chemicals lubricants cleaning agents	6 (0)	SFS 1995:636 SNFS 1997:8
1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(*1H,3H,5H)*-trione TGIC triglycidyl isocyanurate 2451-62-9	b,f	intermediates, raw material paints, varnishes hardeners	13 (0)	SFS 1985:835 KIFS 1986:5

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turpentine 8006-64-2	b	intermediates, raw material diluents (paints etc.) pesticides	111 (53)	-
vanadium pentoxide 1314-62-1	a	catalysts dyestuffs, pigments	9 (0)	SFS 1985:835 KIFS 1986:5
warfarin (ISO) 4-hydroxy-3-(3-oxo-1-phenylbutyl)coumarin 81-81-2	c,d	intermediates, raw material pesticides	< 5	SFS 1985:835 KIFS 1986:5 KIFS 1992:7
vinyl chloride chloroethylene 75-01-4	e	intermediates, raw material paints, varnishes binders (paints, adhesives etc.)	23 (2)	SFS 1985:835 KIFS 1986:5 KIFS 1992:7
ziram (ISO) zinc bis dimethyldithiocarbamate 137-30-4	g [1)]	accelerators adhesives lubricants	8 (0)	[2)]

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CAS No Index

		Page
868-77-9	2-hydroxyethyl methacrylate	42
923-26-2	2-hydroxypropyl methacrylate	42
1085-98-9	dichlofluanide (ISO)	33
1163-19-5	decabromodiphenyl ether	31
1307-96-6	cobalt oxide	30
1313-99-1	nickel monoxide	46
1314-62-1	vanadium pentoxide	55
1327-53-3	diarsenic trioxide	32
1333-82-0	chromium trioxide	28
1344-37-2	C.I. Pigment Yellow 34	29
1675-54-3	bis[4-(2,3-epoxypropoxy)phenyl]propane	23
1717-00-6	1,1-dichloro-1-fluoroethane	33
1787-61-7	C.I. Mordant Black 11	29
1897-45-6	chlorothalonil (ISO)	28
2425-79-8	1,4-bis(2,3-epoxypropoxy)butane	23
2451-62-9	1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(*1H,3H,5H)*-trione	54
2634-33-5	1,2-benzisothiazol-3(2H)-one	22
2687-96-9	1-dodecyl-2-pyrrolidone	37
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	21
3173-72-6	1,5-naphthalene diisocyanate	45
3194-55-6	1,2,5,6,9,10-hexabromocyclododecane	40
3524-68-3	pentaerythritol triacrylate	47
3775-90-4	2-tert-butylaminoethyl methacrylate	25
3926-62-3	sodium chloroacetate	51
4067-16-7	3,6,9,12-tetraazatetradecane-1,14-diamine	52
4083-64-1	4-toluenesulfonyl isocyanate	54
4098-71-9	3-isocyanatomethyl-3,5,5-trimethylcyclohexylisocyanate	43
4719-04-4	hexahydro-1,3,5-tris(hydroxyethyl)triazine	41
4986-89-4	pentaerythritol tetraacrylate	47
5124-30-1	4,4'-methylenedi(cyclohexyl isocyanate)	45
5873-54-1	diphenylmethane-2,4'-diisocyanate	35
5989-27-5	(R)-p-mentha-1,8-diene	44
6317-18-6	methylene dithiocyanate	45
6731-36-8	1,1-bis(tert-butylperoxy)-3,5,5-trimethylcyclohexane	23
7440-02-0	nickel	46
7440-48-4	cobalt	30
7637-07-2	boron trifluoride	24
7664-39-3	hydrofluoric acid	42

		Page
68955-36-2	residues (petroleum), steam-cracked, resinous	50
70592-77-7	distillates (petroleum), light vacuum	37
73138-82-6	rosin	50
85535-84-8	chloroalkanes, C10-13	27
91273-04-0	N,N-bis(2-ethylhexyl)-((1,2,4-triazol-1-yl) methyl)amine	23
91673-30-2	formaldehyde, reaction product with butylphenol	39
92061-97-7	residues (petroleum), catalytic, cracking	50
98219-64-8	residues, steam-cracked, thermally treated	50
106264-79-3	6-methyl-2,4-bis(methylthio)phenylene-1,3-diamine	45
106990-43-6	N,N',N'',N'''-tetrakis[4,6-bis(butyl-(N-methyl-2,2,6,6-tetramethylpiperidine-4-yl)amino) triazin-2-yl]-4,7-diazadecane-1,10-diamine	52
114565-65-0	2,2-iminodiethanol-6-methyl-2-[4-(2,4,6-triaminopyrimidine-5-ylazo)phenyl]benzotiazol-7-sulphonate and N,N-diethylpropane-1,3-diamine-6-methyl-2-[4-(2,4,6-triaminopyrimidine-5-ylazo)phenyl]benzotiazol-7-sulphonate and 2-methylaminoethanol-6-methyl-2-[4-(2,4,6-triaminopyrimidine-5-ylazo)phenyl] benzotiazol-7-sulphonate	43
116889-78-2	tetrasodium 4-amino-5-hydroxy-6-[3-[2 [2-(sulfonatoxy)ethylsulphonyl]ethylcarbamoyl] phenylazo]-3-[4-[2-(sulfonatooxy) ethylsulphonyl]phenylazo]naphthalene-2,7-disulphonate	53
130498-29-2	polycyclic aromatic hydrocarbons	18

Alphabetical index by name

		Page
tetraethylenepentamine	112-57-2	54
1,2,3,6-tetrahydromethyl phthalic anhydride	26590-20-5	52
tetrahydrophthalic anhydride	85-43-8	31
1,2,3,6-tetrahydro-N(trichloromethylthio)phthalimide	133-06-2	25
N,N',N'',N'''-tetrakis[4,6-bis(butyl-(N-methyl-2,2,6,6-tetramethylpiperidine-4-yl)amino)triazin-2-yl]-4,7-diazadecane-1,10-diamine	106990-43-6	52
4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	47
tetramethylthiuram disulphide	137-26-8	53
tetramethylthiuram monosulphide	97-74-5	53
tetrasodium 4-amino-5-hydroxy-6-[3-[2-[2-(sulfonatooxy)ethylsulphonyl]ethylcarbamoyl] phenylazo]-3-[4-[2-(sulfonatooxy)ethylsulphonyl] phenylazo]naphthalene-2,7-disulphonate	116889-78-2	53
TGIC	2451-62-9	54
thiram	137-26-8	53
tin(II)methane sulphonate	53408-94-9	53
toluene-2,4-diisocyanate	584-84-9	53
toluene-2,6-diisocyanate	91-08-7	53
4-toluenesulfonyl isocyanate	4083-64-1	54
o-toluidine	95-53-4	54
tosyl isocyanate	4083-64-1	54
3,6,9-triazaundecane-1,11-diamine	112-57-2	54
1,3,5-triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	41
1,1,1-trichloroethane	71-55-6	54
N-(trichloromethylthio)phthalimide	133-07-3	54
1,1,2-trichloro-1,2,2-trifluoroethane	76-13-1	54
triethylenetetramine	112-24-3	32
triglycidyl isocyanurate	2451-62-9	54
trimellitic anhydride	552-30-7	22
trimethylolpropane triacrylate	15625-89-5	23
1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(*1H,3H,5H)*-trione	2451-62-9	54
turpentine	8006-64-2	55
vanadium pentoxide	1314-62-1	55
warfarin (ISO)	81-81-2	55
vinyl chloride	75-01-4	55
zinc and zinc compounds	-	19
zinc bis dimethyldithiocarbamate	137-30-4	55
ziram (ISO)	137-30-4	55

Substances deleted from the previous list due to reduced quantities

The substances listed below have been deleted from the previous Observation List since, according to the Chemicals Inspectorate's Products Register, they no longer occur in quantities exceeding 1 ton.

CAS No	Name
75-25-2	tribromomethane
75-63-8	bromotrifluoromethane
75-69-4	trichlorofluoromethane
76-14-2	1,2-dichloro-1,1,2,2-tetrafluoroethane
76-15-3	chloropentafluoroethane
106-63-8	isobutyl acrylate
110-49-6	2-methoxyethyl acetate
353-59-3	bromochlorodifluoromethane
2536-05-2	diphenylmethane-2,2'-diisocyanate
26628-22-8	sodium azide
85409-17-2	tributyltin naphtenate

Appendix 2

Statutes and Government Bills

Swedish Code of Statutes

SFS 1985:835	The Chemical Products Ordinance
SFS 1985:838	The Motor Gasoline (Petrol) Ordinance
SFS 1985:839	The Cadmium Ordinance
SFS 1985:840	The Ordinance on Certain Products Hazardous to Health and to the Environment etc.
SFS 1991:1290	The Mercury-Containing Products (Certain) Ordinance
SFS 1995:636	Ordinance on Substances which Deplete the Ozone Layer
SFS 1997:186	Ordinance on Highest Permissible Concentration of Heavy Metals (Certain) in Packagings
SFS 1997:645	The Battery Ordinance

Code of Statutes of the National Board of Occupational Safety and Health

AFS 1996:2	Ordinance of the National Board of Occupational Safety and Health containing Provisions on Occupational Exposure Limit Values
AFS 1996:4	Ordinance of the National Board of Occupational Safety and Health containing Provisions on Thermosetting Plastics

Code of Statutes of the Swedish Environmental Protection Agency

SNFS 1997:8	Regulations of the Swedish Environmental Protection Agency on Deviation from Section 2 of the Ordinance (1995:636) on Substances which Deplete the Ozone Layer

Code of Statutes of the National Chemicals Inspectorate

KIFS 1986:5	Regulations on Permit Requirements for Extremely Dangerous and Very Dangerous Chemical Products
KIFS 1989:2	Regulations on Chromium in Cement
KIFS 1989:5	Regulations on Formaldehyde in Wood-Based Boards
KIFS 1990:10	Regulations on Preservative-treated Wood
KIFS 1992:7	Regulations on Restriction of Certain Chemical Products
KIFS 1992:9	Regulations on Mercury-Containing Products

Government Bills

Bill 1990/91:90	A living environment
Bill 1993/94:163	Guiding principles for a continued adaptation of society to the ecocyle
Bill 1995/96:120	Our environment. Environmental activities during the year (1995).

Further help when considering what chemicals to choose can be found in the brochure ***Seven steps to choosing less hazardous chemicals.*** This brochure is mainly aimed for anyone who uses, sells or manufactures chemical products and goods.

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