

PROCEDURE: Chemical and Material Blacklist

1.0 PURPOSE

The Hydratech Industries Chemical and Material Blacklist contains a list of substances and mixtures which are prohibited to use in accordance with global, regional or local legislation/regulations. The overall purpose of the Blacklist is to ensure that Hydratech Industries do not use illegal products and substances.

2.0 RESPONSIBILITIES

The Global Procurement manager is responsible for implementation, review and update of the Blacklist.

3.0 DESCRIPTION

Hydratech Industries chemical and material blacklist is incorporating the requirements set out in the following legislation:

1.	The Danish Ministry of Environment and Energy's regulation no. 1082 of 13. September 2007 on prohibited import and sale of plumbiferous products. (Called Miljø- and Energiministeriets bek. nr. 1082 af 13. September 2007 om forbud mod import og salg af produkter, der indeholder bly.)
2.	The European Parliament and Council's regulation 2008/0240 (COD) of 27. Maj 2011 on limitation of the use of certain harmful substances in electric and electronic equipment. Also known as the RoHS Directive
3.	Regulation (EC) No. 1907/2006 of the European Parliament and the Council of 18. December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC. Including the REACH restricted list.
4.	Stockholm Convention on Persistent Organic Pollutants (POP's), 22. May 2001 (4 th meeting held in Genova, 4-8 th May 2009)
5.	Rotterdam Convention, PIC Circular XXV – June 2007
6.	The Montreal Protocol on Substances that Deplete the Ozone Layer
7.	Kyoto Protocol of 1992 first and second period
8.	European Parliament and Council's regulation 67/548/EEC Classification, packaging and labelling of hazardous substances.
9.	European Parliament and Council's regulation 1272/2008, CLP Classification
10.	China restricted Ozone-depleting substance list (1 st batch) (Revised in 1998)

The general cut-off limit for the specific substances are 0,1% if nothing else is stated. This means that if a product contains less than 0,1% of the ingredient, it is not considered prohibited unless the specific applicable local legislation states otherwise. If a product containing substances specified as prohibited in the Hydratech Industries Chemical and Material Blacklist is delivered to a country, where the substance is not prohibited according to local law, the product shall be considered a Restricted Material and not Prohibited Material. This means that the material shall be subject to the conditions set out in the Material Restricted List.

The Material Restricted List provides information about which products Hydratech Industries has restricted the use of based on regional or local legislation, and which products Hydratech Industries restricts the use of due to their special hazard classification. The overall aim of the list is to protect employees and ensure the

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future production by limiting the use of products which are expected to be prohibited by authorities in the future

The Material Restricted List contains a list of classifications which make the product restricted if the product overall is classified as such. The list also contains some specific compounds that have either been an issue in the industry previously or are expected to be prohibited in the future. Once a product is restricted according to this list, the Supplier is only allowed to use this in products delivered to Hydratech Industries, if Hydratech Industries has provided the Supplier with a specific dispensation. The dispensation must contain an action plan for either finding alternative products and an evaluation of why no alternative product is available for the specific purpose. When the dispensation has been filled out, the dispensation must be signed by Hydratech Industries.

3.1 Documentation for compliance with the Hydratech Industries Chemical and Material Blacklist

Upon Hydratech Industries request Supplier shall provide full clarification on the compounds involved, irrespective of whether a SDS is required or not.

If the Supplier is not able to deliver a full material declaration, the Supplier must sign a statement of fulfilment to the Hydratech Industries Chemical and Material Blacklist.

3.2 Hydratech Industries Chemical and Material Blacklist

All the components/ingredients which are listed in the Chemical and Material Blacklist are prohibited according to the specific legislation. This means that the specific legislation does not allow the use of these substances in specific applications.

If the product is to be used only outside the specific region/country where the product is prohibited or the product is used for an alternative purpose as described as an exception in the legislation the product is considered as restricted according to the Hydratech Industries Restricted List and must comply with the requirements set out herein.

Table 1: List of prohibited chemical compounds/ingredients		
Substance/CAS/Reference	Conditions of prohibition	The prohibition covers
PCB if concentration is greater than 0,005 w/w% (CAS 1336-36-3)		EU
Polychlorinated terphenyls (PCT's), (CAS several numbers (e.g. CAS 61788-33-8, 12642-23-8)), [Ref 3/4/5]	Shall not be used as propellant in aerosols for any use. Aerosols dispensers containing the substance	EU

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Substance/CAS/Reference	Conditions of prohibition	The prohibiton covers
	as propellant shall not be placed on the market	
Chloroethene (vinyl chloride), (CAS No. 75-01-04) [Ref. 3]	Shall not be used as propellant in aerosols for any use. Aerosols dispensers containing the substance as propellant shall not be placed on the market	EU
Chloroform, (CAS 67-66-3), [Ref. 3] 1,1,2-trichlorethane, (CAS 79-00-5), [Ref. 3] 1,1,2,2-tetrachloroethane, (CAS 79-34-5), [Ref. 3] 1,1,1,2-tetrachloroethane, (CAS 630-20-6), [Ref. 3] Pentachloroethane, (CAS 76-01-7), [Ref. 3] 1,1-dichloroethylene, (CAS 75-35-4), [Ref. 3]	Shall not be placed on the market or used as substances, as constituents of other substances, or in mixtures in concentrations equal to or greater than 0,1% by weight, where the substance or mixture is intended for the application specified in the legislation	EU
Tetrachloromethane, (CAS 56-23-5), [Ref. 6]	Shall not be placed on the market	EU
1,1,1-trichloroethane, (CAS 71-55-6), [Ref. 6]	Shall not be placed on the market	EU
Hexachloroethane, (CAS 67-72-1), [Ref. 3]	Shall not be placed on the market, or used as substance in mixtures, where the substance or mixture is intended for the manufacturing or processing of non-ferrous material	EU
Alkanes, C10-C13, chloro (short-chain chlorinated paraffins) (SCCP's) for processing of metals, (CAS 85535-84-8), [Ref. 3]	Shall not be placed on the market, or used as substances, or as constituents of other substances or in mixtures in concentration greater than 1% by weight, where the substance or mixture is intended for the purpose specified in the legislation	EU
Monomethyl-tetrachlorodiphenylmethan, (CAS 76253-60-6), [Ref. 3] Monomethyl-dichloro-diphenyl methane (no CAS Number. (EC. NO: 400-140-6), [Ref. 3] Monomethyl-dibromo-diphenyl Methane (DBBT), (CAS 99688-47-8), [Ref. 3]	Shall not be placed on the market, or used as a substance or in mixtures. Articles containing the substance shall not be placed on the market. Shall not be placed on the market or used as a substance, as a constituent of other substances, or in mixtures in concentrations equal to or greater than 0,1% by weight (w/w%).	EU
Mirex, (CAS 2385-85-5), [Ref. 4/5]		EU
Benzene, (CAS 71-43-2), [Ref. 3]	Shall not be placed on the market or used as a substance, as a constituent of other substances, or in mixtures greater than 0,1% by weight (w/w%)	EU

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Table 1: List of prohibited chemical compounds/ingredients		
Substance/CAS/Reference	Conditions of prohibition	The prohibiton covers
2,4,6-tri-tertbutylphenol, (CAS 732-26-3), [Ref. 5]	Shall not be placed on the market	155 countries
Nonylphenol, (CAS 25154-52-3), [Ref. 3] Nonylphenol ethoxylate, (e.g. CAS 9016-45-9), [Ref. 3]	Shall not be placed on the market, or used as substances or in mixtures in concentrations equal to or greater than 0,1% by weight for the specific list of purposes specified in the legislation	EU
Trichlorofluoromethane (CFC-11), (CAS 75-69-4) Dichlorodifluoromethane (CFC-12), CAS 75-71-8) Trichlorotrifluoroethane (CFC-113), (CAS 76-13-1) Dichlorotetrafluoroethane (CFC-114), (CAS 76-14-2) Chloropentafluoroethane (CFC-115), (CAS 76-15-3) Bromochlorodifluoromethane (halon-1211), (CAS 353-59-3) Trifluoro bromomethane (halon-1301), (CAS 75-63-8) Dibromotetrafluoroethane (halon-2402), (CAS 124-73-2) Hydrobromofluorocarbon (HBFC), (CAS Several options) Bromochloromethane, (CAS 74-97-5) Methyl bromide, (CAS 74-83-9) Chlorodifluoromethane (HCFC-22), (CAS 75-45-6) Dichlorotrifluoroethane (HCFC-123), (CAS 306-83-2) Dichlorofluoroethane (HCFC-141), (CAS1717-00-6) Chlorodifluoroethane (HCFC-142b), (CAS 75-68-3), [Ref. 6] [Ref. 10]	Ozone depleting substances, prohibited to use. For example, CFC, Halons, HBFC, HCFC and HCFC's	Global
III-CCl ₄ , (CAS 56-23-5), [Ref. 10]	Prohibited to use	CN
CFC-13, CFC-111, CFC-112, CFC-211, CFC-212, CFC-213, CFC-214, CFC-215, CFC-216, CFC-217 (CAS Several), [Ref. 10]	Prohibited to produce and use	CN
IV-C ₂ H ₃ Cl ₃ (CAS several) [Ref. 10]	Prohibited to produce and use	CN
HCFC-21, HCFC-22, HCFC-31, HCFC-121, HCFC-122, HCFC-123, HCFC-124, HCFC-131, HCFC-132, HCFC-133, HCFC-141, HCFC-141b, (CAS several), [Ref. 10]	Prohibited to use due to the country's decision to completely phase-out substances. Phase out plan running from 2013 to 2030	CN
HCFC-142, HCFC-142b, HCFC-151, HCFC-221, HCFC-222, HCFC-223, HCFC-224, HCFC-225, HCFC-225ca, HCFC-225cb, HCFC-226, HCFC-231, HCFC-232, HCFC-233, HCFC-234, HCFC-235, HCFC-241, HCFC-242, HCFC-243, HCFC-244, HCFC-251, HCFC-252, HCFC-253, HCFC-261, HCFC-262, HCFC-271, (CAS several), Ref. 10)		

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Table 1: List of prohibited chemical compounds/ingredients		
Substance/CAS/Reference	Conditions of prohibition	The prohibition covers
VI-HBFC's (Several CAS), [Ref. 10]	Prohibited to produce and use	CN
VII-CH ₂ BrCl (Several CAS), [Ref. 10]	Prohibited to produce and use	CN
VIII-CH ₃ Br (Several CAS), [Ref. 10]	Prohibited to produce and use	CN
Diphenyl ether, Penta-bromo derivative and Octabromo derivative, (CAS 32534-81-9 & 32536-52-0), [Ref. 3/5]	Diphenyl ether, polybromo derivative.	155 countries
Polybrominated biphenyls (PBB), (CAS 59536-65-1), [Ref. 3/5]	Shall not be used in textile articles, such as garment, undergarments and linen, intended to come into contact with the skin	155 countries
Polybrominated diphenyl ethers (PBDE), (CAS not available), [Ref. 3/5]		155 countries
Asbestos, (CAS 12001-28-4, 12001-29-5, 12172-73-5, 132207-32-0, 1332-21-4, 77536-66-4, 77536-67-5, 77536-68-6), [Ref. 3/5]	The manufacture, placing on the market and use of these fibres and of articles and mixtures containing these fibres added intentionally is prohibited	155 countries
Organostannic compounds – The ban is for use as biocide in paint and in treatment of industrial water as described in the legal requirement, (CAS several options), [Ref. 3]	Shall not be placed on the market or used as substances or in mixtures according to the requirements of the legislation	EU
Tri-substituted organostannic compounds (TBT and TPT), Dibutyltin (DBT) and Dioctyltin (DOT), (Several CAS NO.), [Ref. 3]	Prohibited in concentration greater than 0,1 w/w%. Calculated as Sn. The prohibition applies as described in the legal requirement.	EU
Mercury compounds, (CAS several options), [Ref. 3], and above 0,1% in electrical equipment, [Ref. 2]	Shall not be placed on the market or used as substances or in mixtures where the substance or mixture is intended for use as described in the legislation	EU
Arsenic compounds, (CAS several options), [Ref. 3]	Shall not be placed on the market or used as substances or in mixtures where the substance or mixture is intended for use as described in the legislation	EU
Cadmium compounds, (CAS several options), [Ref. 3]	The prohibition covers specific uses as specified the legislation	EU
Chrome VI compounds, (CAS several options), [Ref. 3]	The prohibition covers specific uses as specified the legislation (for example in cement and cement-containing preparations in concentrations above 0,0002% of the total dry weight of the cement).	EU

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Table 1: List of prohibited chemical compounds/ingredients		
Substance/CAS/Reference	Conditions of prohibition	The prohibiton covers
Polybrominated biphenyls (PBB) (CAS 59536-65-1) [Ref. 2]	The prohibition covers electrical equipment where the compound is above 0,1%	EU
Polybrominated diphenyl ethers (PBDE) (CAS not available) [Ref. 2]	The prohibition covers electrical equipment where the compound is above 0,1%	EU
Lead in electrical equipment	The prohibition covers electrical equipment where the compound is above 0,1%	EU
Lead, (CAS several options), [Ref. 1]	Shal not be placed on the market or used as substances or in mixtures where the substance or mixture is intended for use as specified in the legislation	DK
Substances listed in the REACH regulation with restriction.	Many of these are just restricted sales to the public	EU
One example of the 520 products restricted by REACH is: Methylene diphenyl diisocyanato (MDI) (CAS 26447-40-5) [Ref. 3]	Shall not be placed on the market after 27 December 2010 as a constituent of mixtures in concentrations equal to or greater than 0,1% by weight of MDI for supply to the general public, unless suppliers ensure before the placing on the market that the packaging: (a) Contains protective gloves which comply with the requirements of the Council Directive 89/686/EEC; (b) is marked visibly, legibly and indelibly as follows, and without prejudice to other Community legislation concerning the classification, packaging and labelling of substances and mixtures: - Persons suffering from asthma, eczema, or skin problems should avoid contact, with this product. - This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (that is type A1 according to standard EN 14387) is used.	EU

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3.3 Exceptions

The below listed exceptions are exceptions in the specific applicable legislation and the Supplier is allowed to use such substances in Products delivered to Hydratech Industries.

Table 2 Exceptions for the Blacklist		
Benzene in products with concentrations above 0,1 w/w%, (CAS 71-43-2), [Ref. 3]	<p>Shall not be placed on the market or used as substance as a constituent of other substances, or in mixtures, in concentrations equal to or greater than 0,1% by weight.</p> <p>Exceptions are:</p> <ul style="list-style-type: none"> - motor fuels which are covered by Directive 98/70/EC; - substances and mixtures for use in industrial processes not allowing for the emission of benzene in quantities in excess of those laid down in existing legislation 	EU
Cadmium compounds, (CAS several options), [Ref. 3]	<p>The prohibition covers specific uses as specified the legislation.</p> <ul style="list-style-type: none"> - The prohibition does not apply to batteries. 	EU

3.4 Material Restricted List

The Material Restricted List contains of two tables (table 3 and table 4). Table 3 contains specific overall hazard classifications which makes a product restricted according to the list. Table 4 contains specific substances with very high focus from the authorities for being phased out and is likely to be prohibited in the future and these are therefore also restricted. If a product is classified as hazardous as specified in the restricted list, then a dispensation must be filled out by Hydratech Industries before the product is purchased. The Supplier must deliver a SDS and information needed for Hydratech Industries to assess the HSE risks associated with the products. The Material Restricted List is applicable for chemicals and materials used Hydratech Industries products, for testing, maintaining or servicing Hydratech Industries products, in Hydratech Industries production, in Hydratech Industries buildings as well as in all business units of Hydratech Industries.

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Table 3: Hazard statement and hazard category (GHS/CLP)			
Health Hazards			
Mutagenic	H340	May cause genetic defects	
	H341	Suspected of causing genetic defects	
Carcinogenic	H350	May cause cancer	(ACGIH A1 and A2), IARC (Group 1, 2A and 2B)
	H351	Suspected of causing cancer	
Reproductive toxic	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	
Toxic	H300	Fatal if swallowed	
	H301	Toxic if swallowed	
	H310	Fatal in contact with skin	
	H311	Toxic in contact with skin	
	H330	Fatal if inhaled	
	H331	Toxic if inhaled	
	H370	Causes damage to organs	
	H372	Causes damage to organs through prolonged or repeated exposure	
Sensitizing	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled	
Physical Hazards			
Explosives	Several		
Environmental Hazards			
Aquatic	H400	Very toxic to aquatic life	
	H410	Very toxic to aquatic life with long-lasting effects	
Ozone depleting	EUH059	Hazardous to the ozone layer, superseded by GHS Class 5.1 in the second adaptation to technical progress of CLP	

Table 4: Substances			
Group	Substance	CAS-no.	Remarks/reference
REACH Candidate list	Several substances – please see the reference for a list of the current SVHC list		[Ref. 3] http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp
Greenhouse gas	SF6 (Sulphur hexafluoride) (insulator in switch gear).	2551-62-4	[Ref. 6/7]
Composites	Styrene and polyester (Monomeric) The restriction does not apply to materials used for maintenance and repair of old wind turbines	Several options	Monomeric Styrene is used for manufacturing some fiberglass reinforced parts and in the production of styrene containing polymers (for example certain rubber parts, vacuum formed ABS). However, in the manufactured product, monomeric styrene is converted to polymeric styrene and the finished products are not subject to the restriction.

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3.5 Definitions

Table 5: Definitions	
Cas No.	Unambiguous number that identifies a particular chemical. The Chemical Abstract Service is part of the American Chemical Society and maintains a database of chemical compounds and sequences. The CAS database currently contains over 55 million different organic and inorganic chemical compounds. Each CAS entry is identified by its CAS Registry Number, or CAS number for short
Chemical	A hazardous substance or mixture
Classification	Systems that identify the hazards of a chemical. Tables 1 and 2 in the Chemical and Material Blacklist are based on classification rules according to the UN Globally Harmonized System (GHS)
Hazardous Substance	Any potentially toxic, harmful, irritating, corrosive or asphyxiant substance or a mixture thereof which can enter the human body or be harmful to the environment during its normal intended use, including the entire spectrum of chemicals, for example soaps, oils and acids.
Ingredient	A chemical that is part of a mixture
Material	A pure substance or a homogenous mixture of chemicals. Material in this context refer to all materials containing a potentially prohibited or regulated compound as an ingredient
SDS	The Safety Data Sheet is a written document that outlines ingredients and classification information and procedures for handling and working with chemicals in a safe way. The SDS must be outlined according to applicable legislation
ACGIH	American Conference of Governmental Industrial Hygienists
IARC	International Agency for Research on Cancer
QSE	Quality, Safety and Environment

4.0 ISO CLAUSE REFERENCE

- DS/EN ISO 9001:2015 8.4 Control of externally provided processes, products and services

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