

# Safety Data Sheet

Conforms to Regulation (EC) No. 1907/2006 (REACH) and the ammendment Regulation (EC) No. 2015/830

EU

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1 Product identifier

**Product Name:** WorkBeads™ Co-IDA  
**Article Number:** 40 650 401, 40 650 403, 40 650 410,  
**Product description:** Agarose-based resin for chromatography.

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

For research and process chromatography.

### 1.3 Manufacturer/Supplier of Material Safety Data Sheet

Bio-Works Sweden AB  
Virdings allé 18  
SE-754 50 Uppsala, Sweden  
Phone: +46 8 5626 7430  
E-Mail: [info@bio-works.com](mailto:info@bio-works.com)

### 1.4 Emergency telephone number

+46 8 5626 7430 (Bio-Works Sweden AB)

### National advisory body/Poison Centre

Please contact the regional company representation in your country.

## SECTION 2: HAZARDS IDENTIFICATION

**Hazardous components:** Ethanol, and cobalt compound.

**Prevention:** Wear protective gloves, eye or face protection. Keep away from heat, sparks and flames, and hot surfaces. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.

### 2.1 Classification of the substance or mixture

|                                                                             |                              |                   |
|-----------------------------------------------------------------------------|------------------------------|-------------------|
| <b>Product definition:</b>                                                  | Mixture                      |                   |
| <b>Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]:</b> | Hazardous, Flammable. Liquid | Category 3, H226  |
|                                                                             | Carcinogen                   | Category 1B, H350 |
|                                                                             | Skin Sensitiser              | Category 1, H317  |
|                                                                             | Respiratory sensitiser       | Category 1, H334  |
|                                                                             | Aquatic hazard Acute         | Category 1, H400  |
|                                                                             | Aquatic hazard Chronic       | Category 1, H410  |

**Ingredients of unknown toxicity:** N/A

**Ingredients of unknown ecotoxicity:** N/A

## 2.2 Label elements

Classification according to Regulation (EC) No 1272/2008 [CLP]

### Hazard pictogram



### Signal word

Danger

### Hazard statements

H226 Flammable liquid and vapour.  
H317 May cause an allergic skin reaction.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H350: May cause cancer  
H400 Very toxic to aquatic life.  
H410 Harmful to aquatic life with long lasting effects.

### Precautionary statements

#### General Prevention

P202 Do not handle until all safety precautions have been read and understood.  
P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.  
P241 Use explosion-proof electrical/ventilating/lighting/.../equipment.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P281 Use personal protective equipment as required.  
P285 In case of inadequate ventilation wear respiratory protection.  
P273 Avoid release to the environment.

#### Response

P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P333 + P313 IF skin irritation or rash occurs: Get medical advice/attention.  
P304 + P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P308 + P313 IF exposed or concerned: Get medical advice/attention.  
P342 + P311 IF experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.  
P363 Wash contaminated clothing before reuse.  
P391 Collect spillage.

#### Storage Disposal

P403 Store in a well-ventilated place.  
P501 Dispose of contents/container in accordance with local, regional, national or international regulations.

### Hazardous ingredients Supplemental label elements

Contains 20% ethanol as preservative. Contains cobalt.  
May produce an allergic reaction.

## 2.3 Other hazards

None known.

## SECTION 3: COMPOSITION/INFO ON INGREDIENTS

### 3.1 Substances

Not applicable

### 3.2 Mixtures

Contains cross-linked agarose beads with cobalt (II) ions attached by chelation, and with 20% ethanol as preservative.

| Product/Ingredient name | Identifiers                                                                       | Content (%) | Classification according to Regulation (EC) No 1272/2008 (CLP) <sup>⌘</sup>                       |                                               |
|-------------------------|-----------------------------------------------------------------------------------|-------------|---------------------------------------------------------------------------------------------------|-----------------------------------------------|
|                         |                                                                                   |             | Hazard class and Category codes                                                                   | Hazard statements                             |
| Ethanol                 | CAS: 64-17-5<br>REACH #: 01-2119457610-43<br>EC: 200-578-6<br>INDEX: 603-002-00-5 | 17-19       | Flam. Liq. 2                                                                                      | H225                                          |
| Cobalt sulphate         | CAS: 10124-43-3<br>REACH #: N/A<br>EC: 233-334-2<br>INDEX: 027-005-00-0           | 0.1-0.2     | Carc. 1B<br>Acute Tox. 4<br>Resp. Sens. 1<br>Skin Sens. 1<br>Aquatic Acute 1<br>Aquatic Chronic 1 | H350i<br>H302<br>H334<br>H317<br>H400<br>H410 |

⌘) See List of abbreviations in section 16.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of first aid measures

|                      |                                                                                                                                                                                                                                                                                     |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General notes</b> | None                                                                                                                                                                                                                                                                                |
| <b>Inhalation</b>    | Not expected to be a significant hazard under anticipated conditions of normal use. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. |
| <b>Skin contact</b>  | Remove/Take off immediately all contaminated clothing and shoes. Rinse skin with water/shower. Consult doctor in case of complaints.                                                                                                                                                |
| <b>Eye contact</b>   | Remove contact lenses, if present and easily done. Rinse eyes with plenty of water for at least 10 minutes. Consult doctor if irritation occurs.                                                                                                                                    |
| <b>Ingestion</b>     | Not expected to be a significant hazard under anticipated conditions of normal use. Remove victim to fresh air. Rinse mouth with water. If the victim is conscious, give                                                                                                            |

small quantities to drink. Do not give anything to drink or eat if the person is unconscious. Do not induce vomiting. Consult doctor for advice.

**Self-protection of first aider**

Wear personal protection equipment (PPE).

**Notes to physician**

Treat symptomatically. Contact poison treatment specialist if large quantities have been ingested or inhaled.

**4.2 Most important symptoms and effects, both acute and delayed**

**Inhalation**

No known significant effects or critical hazards.

**Skin contact**

No known significant effects or critical hazards.

**Eye contact**

No known significant effects or critical hazards.

**Ingestion**

Upon ingestion of large quantities: Dizziness, vomiting, narcosis, respiratory paralysis.

**4.3 Indication of any immediate medical attention and special treatment needed**

No information available.

**SECTION 5: FIREFIGHTING MEASURES**

**5.1 Extinguishing media**

**Suitable extinguishing media**

Use water, foam, dry powder/drychemical or carbon dioxide (CO<sub>2</sub>)

**Unsuitable extinguishing media**

Do not use water jet.

**5.2 Special hazards arising from the substance or mixture**

**Hazards from the substance or mixture**

Flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

**Hazardous combustion products**

In the event of fire may produce hazardous combustion gases or vapours, including carbon dioxide and carbon monoxide

**5.3 Advice for firefighters**

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Wear self-contained breathing apparatus. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel** No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment according to Section 8.

**For emergency responders** If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**6.2 Environmental precautions** Avoid discharge into soil, waterways, drains and sewers.

### **6.3 Methods and material for containment and cleaning up**

**Small spill** Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** Stop leak if without risk. Move containers from spill area. Cover drains. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or and place in container for disposal according to local regulations. Dispose of product and contaminated absorbent material according to local, regional, national or international regulations.

**6.4 Reference to other sections** See SECTION 1 for emergency contact information  
See SECTION 8 for personal protection information  
See SECTION 13 for waste treatment information

## **SECTION 7: HANDLING AND STORAGE**

Store and handling at 2 to 25°C. Small amounts can be flushed down a sink with a large quantity of water unless local rules prohibit this. The product is stable. Under normal conditions of storage and use hazardous polymerization will not occur. Avoid strong oxidizing agents.

### **7.1 Precautions for safe handling**

**Protective measures** Always wear recommended protective equipment, see SECTION 8. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Use adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an

approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers may retain product residue and can be hazardous. Do not reuse container. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Take precautionary measures against electrostatic discharges.

**Advice on general occupational hygiene** Eating, drinking and smoking must be prohibited in areas where this material is handled, stored and processed. Users should wash hands before eating, drinking and smoking. Remove protective equipment and clothing, and contaminated clothing, before entering eating areas. See Section 8 for additional information.

**7.2 Conditions for safe storage, including any incompatibilities**

Store at 4 to 30°C (39 to 86°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct in a well-ventilated area. Do not store with incompatible materials (see Section 10) or food and drinks. Do not store close to ignition sources or hot surfaces. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not

**7.3 Specific end use(s)**

**Research sector** Recommended for laboratory use.  
**Industrial sector** Guidance not available.

**SECTION 8: LIMIT EXPOSURE**

Use gloves and eye protection. Use in ventilated environment.

**8.1 Control parameters**

**Occupational exposure limits (OEL)**

|                   |         |                 |
|-------------------|---------|-----------------|
| Geographical area | Ethanol | Cobalt sulphate |
|-------------------|---------|-----------------|

|                        | CAS: 64-17-5                                                                             | CAS: 10124-43-3                                                                            |
|------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| EU OEL (TWA)           | None                                                                                     | None                                                                                       |
| EU OEL (STEL)          | None                                                                                     | None                                                                                       |
| Austria                | 1000 ppm<br>1900 mg/m <sup>3</sup>                                                       | None                                                                                       |
| Belgium (TWA)          | 1000 ppm<br>1907 mg/m <sup>3</sup>                                                       | None                                                                                       |
| Denmark (TWA)          | 1000 ppm<br>1900 mg/m <sup>3</sup>                                                       | 0.01 mg/m <sup>3</sup>                                                                     |
| Finland (TWA)          | 1000 ppm<br>1900 mg/m <sup>3</sup>                                                       | None                                                                                       |
| France (VME)           | 1000 ppm<br>1900 mg/m <sup>3</sup>                                                       | None                                                                                       |
| Germany (TWA)          | 500 ppm exposure factor 2<br>960 mg/m <sup>3</sup> exposure factor 2                     | None                                                                                       |
| Ireland (TWA)          | None                                                                                     | 0.01 mg/m <sup>3</sup>                                                                     |
| Italy (TWA)            | None                                                                                     | None                                                                                       |
| Lithuania (TWA)        | 500 ppm<br>1000 mg/m <sup>3</sup>                                                        | None                                                                                       |
| Norway                 | None                                                                                     | None                                                                                       |
| Netherlands (MAC)      | 260 mg/m <sup>3</sup>                                                                    |                                                                                            |
| Poland                 | None                                                                                     | None                                                                                       |
| Spain (TWA)            | None                                                                                     | 0.02 mg/m <sup>3</sup>                                                                     |
| Sweden (TLV/LLV)       | 500 ppm LLV<br>1000 mg/m <sup>3</sup> LLV                                                | 500 ppm LLV (total dust as Co)<br>0.02 mg/m <sup>3</sup> LLV (total inhalable dust, as Co) |
| Switzerland (STEL/TWA) | 1000 ppm STEL<br>1900 mg/m <sup>3</sup> STEL<br>500 ppm TWA<br>960 mg/m <sup>3</sup> TWA | None                                                                                       |
| United kingdom         | None                                                                                     | None                                                                                       |
| US NIOSH (TWA)         | 1000 ppm<br>1900 mg/m <sup>3</sup>                                                       | 0.2 mg/m <sup>3</sup>                                                                      |

**Recommended monitoring procedure** Workplace atmosphere monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following:

European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy)

European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents)

European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents)

Reference to national guidance documents may also be required.

**DNELs/DMELs** Not applicable  
**PNECs** No information available

## 8.2 Exposure controls

**Appropriate engineering controls** Use adequate ventilation using explosion-proof equipment. Use process enclosures, local exhaust ventilation or other engineering controls to airborne contaminants below any recommended or statutory limits, and gas, vapour or dust concentrations below any lower explosive limits.

**Individual protection measures** The personal protective equipments selected must comply with the EC Council Directive 89/686/EEC.

**Hygiene measures** Wash hands, forearms and face after handling the product, before eating, smoking and using the lavatory and at the end of the working period. Remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location and regularly tested.

**Eye/face protection** Use safety glasses, and/or face shield.

**Hand protection** Use chemically resistant protective gloves that comply with the standard EN374; e.g., gloves based on butyl rubber or neoprene, 0.7 mm thickness or more, with breakthrough time of 2 hours or more.

**Body protection** Flame retardant antistatic clothing, e.g., lab coat or when required antistatic overalls, boots and gloves. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Refer to European Standard EN 1149 for further information on electrostatic properties of protective clothing.

**Respiratory protection** Select a respirator based on the hazard and potential for exposure, which meets the appropriate standard or certification. Ensure proper fitting, training, and other important aspects of use. Recommended filter type: Filter A according to DIN 3181. Maintenance, cleaning and testing must be done according to the manufacturer, and properly documented.

**Environmental exposure controls** Do not let product enter drain. Emissions from equipment or ventilation should be checked to ensure they comply with the requirements of the environmental protection legislation. Consider the use of fume scrubbers, filters or engineering modifications to the process equipment to reduce emissions.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Agarose beads with 20% ethanol (slurry) packed in plastic containers.

### 9.1 Information on basic physical and chemical properties

#### Appearance



|                                                     |                                                |
|-----------------------------------------------------|------------------------------------------------|
| <b>Physical state</b>                               | Suspension                                     |
| <b>Color</b>                                        | Light red (Cobalt)                             |
| <b>Odour</b>                                        | Alcohol                                        |
| <b>Odour threshold</b>                              | No information available.                      |
| <b>pH</b>                                           | No information available.                      |
| <b>Melting point/freezing point</b>                 | No information available.                      |
| <b>Initial boiling point and boiling range</b>      | No information available.                      |
| <b>Flash point</b>                                  | 38°C, closed cup                               |
| <b>Evaporation rate</b>                             | No information available.                      |
| <b>Flammability (solid, gas)</b>                    | No information available.                      |
| <b>Upper/lower flammability or explosive limits</b> | No information available.                      |
| <b>Vapour pressure</b>                              | No information available.                      |
| <b>Vapour density</b>                               | No information available.                      |
| <b>Relative density</b>                             | No information available.                      |
| <b>Solubility(ies)</b>                              | Ethanol soluble in water, particles insoluble. |
| <b>Partition coefficient: n-octanol/water</b>       | No information available.                      |
| <b>Auto-ignition temperature</b>                    | No information available.                      |
| <b>Decomposition temperature</b>                    | No information available.                      |
| <b>Viscosity</b>                                    | No information available.                      |
| <b>Explosive properties</b>                         | No information available.                      |
| <b>Oxidising properties</b>                         | No information available.                      |

## 9.2 Other information

No additional information available.

## SECTION 10: STABILITY AND REACTIVITY

Product is stable. Reactivity data not available.

### 10.1 Reactivity

Vapour/air-mixtures are explosive at intense heating.

### 10.2 Chemical stability

Stable

### 10.3 Possibility of hazardous reactions

No hazardous reactions known under normal use or storage.

### 10.4 Conditions to avoid

Heating and sources of ignition.

### 10.5 Incompatible materials

Strongly oxidizing materials.

### 10.6 Hazardous decomposition products

No hazardous decompositions products produced under normal use or storage.

## SECTION 11: TOXICOLOGICAL INFORMATION

Not available. We are not aware of any other hazards for the product.

### 1.1 Information on toxicological effects

**Acute toxicity** Ethanol LC50 Inhalation vapour in rat is 124700 mg/m<sup>3</sup> for 4 hours exposure.

Cobalt sulfate                      Ingestion causes nausea and vomiting.  
Toxic if swallowed. LD50 Oral in rat 1500 mg/kg.

**Irritation**                      No information available.  
**Corrosivity**                    No information available.  
**Sensitisation**                No information available.  
**Repeated dose toxicity**    Cobalt ions    Category 1    No information available  
**Carcinogenicity**            No information available.  
**Mutagenicity**                No information available.  
**Toxicity for reproduction** No information available.

## SECTION 12: ECOLOGICAL INFORMATION

Not available. We are not aware of any other hazards for the product.

### 12.1 Toxicity

| Ingredient name | Results                             | Species                                                 | Exposure |
|-----------------|-------------------------------------|---------------------------------------------------------|----------|
| <b>Ethanol</b>  | Acute EC50 17.921 mg/l Marine water | Algae - Ulva pertusa                                    | 96 hours |
|                 | Acute EC50 2000 µg/l                | Fresh water Daphnia - Daphnia magna                     | 48 hours |
|                 | Acute LC50 25500 µg/l               | Marine water Crustaceans - Artemia franciscana - Larvae | 48 hours |
| <b>Cobalt</b>   | Chronic NOEC 9.96 mg/l Marine water | Algae - Ulva pertusa                                    | 96 hours |
|                 | Acute LC50 4400 µg/l                | Daphnia - Daphnia magna                                 | 48 hours |
|                 | Acute LC50 3.4 mg/l Fresh water     | Fish - Pimephales promelas                              | 96 hours |

### 12.2 Persistence and degradability

Ethanol is degraded readily in fresh water in 20 days.

Inorganic compounds are not degradable.

### 12.3 Bioaccumulative potential

**Cobalt(II) compounds**        Aquatic vegetation BCF: > 100 - 5000  
Invertebrates. , water BCF < 300  
Fish, fresh water BCF/BAF : <10  
Fish, marine water BCF/BAF : <10

### 12.4 Mobility in soil

No information available.

### 12.5 Results of PBT and vPvB assessment

**PBT**                      Not applicable.

**vPvB**                    Not applicable.

### 12.6 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: DISPOSAL CONSIDERATIONS

Disposal of product should be handled in accordance with regional requirements. Dispose via approved waste disposal contractor.

### 13.1 Waste treatment methods

#### Product

**Hazardous waste** This product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

**Waste treatment methods** The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of local, regional, national or international environmental protection and waste disposal legislation. Dispose of mentioned materials must be done via approved waste disposal contractor. Waste must not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. The emptied container may contain residues of the product and must be disposed of accordingly.

#### European waste catalogue (EWC)

According to Decision 2014/955/EU list of waste pursuant to Directive 2008/98/EC.

**Waste code** 07 07 99

**Waste designation** Wastes not otherwise specified

#### Packaging

**Waste treatment methods** The generation of waste should be avoided or minimised wherever possible. Packaging waste should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

## SECTION 14: TRANSPORTATION INFORMATION

Not classified; IATA special provisions A 58- Aqueous solutions containing 24% or less alcohol by volume is not subject to these regulations.

### 14.1 UN number

No regulated

### 14.2 UN proper shipping name

Not available.

### 14.3 Transport hazard class(es)

Not available.

### 14.4 Packing group

Not available.

### 14.5 Environmental hazards

None.

### 14.6 Special precautions for user

Transport in closed container, upright and secure. The person transporting the product must know what to do in the event of an accident or spillage.

#### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not available.

### SECTION 15: REGULATORY INFORMATION

#### Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

None of the components listed.

#### Regulation (EC) No 850/2004 of the European Parliament on persistent organic pollutants and amending Directive 79/117/EEC.

None of the components listed.

#### Regulation (EC) No 649/2012 concerning the export and import of dangerous chemicals.

None of the components are listed.

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### Regulation (EC) No 19707/2006 (REACH)

##### Annex XIV – List of substances subject to authorisation

None of the components are listed.

Substances of higher concern:

Cobalt sulphate: is a candidate for inclusion in Annex XIV for the reason of Carcinogenic Category 1B (according to article 57a), and Toxic for reproduction Appendix 6 Entry 30 — Toxic to reproduction: category 1B (Table 3.1)/category 2 (Table 3.2) (according to article 57c).

##### Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

None of the substances listed.

#### Other regulations

##### Directive 2008/105/EC – Environmental quality standards in the field of water policy

###### Annex I – Environmental quality standards (EQS)

No information.

##### German water hazard classes (Wassergefährdungsklassen) (VwVwS)

###### Annex 2 – Substances hazardous to water

|                      |                                   |
|----------------------|-----------------------------------|
| Ethanol              | Hazard class 1 – low hazard       |
| Cobalt (II) sulphate | Hazard class 2 – hazard to waters |

###### Annex 3

|                      |                                        |
|----------------------|----------------------------------------|
| Cobalt (II) sulphate | Hazard class 3 – high hazard to waters |
|----------------------|----------------------------------------|

##### DIRECTIVE 2012/18/EU (Seveso III)

|                      |                                         |                   |
|----------------------|-----------------------------------------|-------------------|
| Ethanol              | P5c Flammable liquid Category 2         | Limit 5000 tonnes |
| Cobalt (II) sulphate | E1 Hazardous to the Aquatic Environment | Limit 100 tonnes  |

## 15.2 Chemical safety assessment

N/A

## SECTION 16: OTHER INFORMATION

### Hazard statements

H225 Highly flammable liquid and vapour.  
H226 Flammable liquid and vapour.  
H302 Harmful if swallowed.  
H317 May cause an allergic skin reaction.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H400 Very toxic to aquatic life.  
H410 Harmful to aquatic life with long lasting effects.  
H350i May cause cancer by inhalation.  
H372 Causes damage to organs through prolonged or repeated exposure.

### Precautionary statements

P202 Do not handle until all safety precautions have been read and understood.  
P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.  
P241 Use explosion-proof electrical/ventilating/lighting/.../equipment.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P281 Use personal protective equipment as required.  
P285 In case of inadequate ventilation wear respiratory protection.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304 + P341 + IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P308 + P313 IF exposed or concerned: Get medical advice/attention.  
P333 + P313 IF skin irritation or rash occurs: Get medical advice/attention.  
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.  
P391 Collect spillage.  
P403 Store in a well-ventilated place.  
P501 Dispose of contents/container in accordance with local, regional, national or international regulations.

### Abbreviations

|     |                                                                                    |
|-----|------------------------------------------------------------------------------------|
| BAF | Bioaccumulation factor                                                             |
| BCF | Bioconcentration factor                                                            |
| CAS | Chemical Abstracts Service                                                         |
| CLP | Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] |

|       |                                                             |
|-------|-------------------------------------------------------------|
| DMEL  | Derived Minimal Effect Level                                |
| DNEL  | Derived No Effect Level                                     |
| EQS   | Environmental Quality Standard                              |
| IATA  | The International Air Transport Association                 |
| LC50  | Lethal concentration required to kill 50% of the population |
| LD50  | Lethal dose required to kill 50% of the population          |
| LLV   | Lower Limit Value                                           |
| MAC   | Maximum Allowable Concentration                             |
| NIOSH | National Institute for Occupational Safety and Health       |
| NOEC  | No Observed Effect Concentration                            |
| OELs  | Occupational Exposure Limits                                |
| PBT   | Persistent, Bioaccumulative and Toxic                       |
| PNEC  | Predicted No Effect Concentration                           |
| STEL  | Short-Term Exposure Limits                                  |
| TLV   | Threshold Limit Value                                       |
| TWA   | Time-Weighted Average                                       |
| vPvB  | very Persistent, very Bioaccumulative and/or Toxic          |

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