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IRS3223-B Hardener

## Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

**IRS3223-B Hardener**

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

##### Relevant identified uses of the substance or mixture:

Adhesive

##### Uses advised against:

No information available at present.

#### 1.3 Details of the supplier of the safety data sheet

Intertronics  
Unit 12a  
Station Field Industrial Estate  
Banbury Road  
Kidlington  
Oxfordshire, OX5 1JD  
+44 (0)1865 842842

#### 1.4 Emergency telephone number

##### Emergency information services / official advisory body:

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##### Telephone number of the company in case of emergencies:

+ 44 (0)1865 842842

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification according to Regulation (EC) 1272/2008 (CLP)

| Hazard class | Hazard category | Hazard statement                    |
|--------------|-----------------|-------------------------------------|
| Eye Irrit.   | 2               | H319-Causes serious eye irritation. |

#### 2.2 Label elements

##### Labeling according to Regulation (EC) 1272/2008 (CLP)



Warning

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H319-Causes serious eye irritation.

P280-Wear eye protection / face protection.

P305+P351+P338-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313-If eye irritation persists: Get medical advice / attention.

## 2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

## SECTION 3: Composition/information on ingredients

### 3.1 Substance

n.a.

### 3.2 Mixture

|                                                                    |                       |
|--------------------------------------------------------------------|-----------------------|
| <b>1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol</b>             |                       |
| <b>Registration number (REACH)</b>                                 | 01-2119552434-41-XXXX |
| <b>Index</b>                                                       | ---                   |
| <b>EINECS, ELINCS, NLP</b>                                         | 203-041-4             |
| <b>CAS</b>                                                         | 102-60-3              |
| <b>content %</b>                                                   | 10-20                 |
| <b>Classification according to Regulation (EC) 1272/2008 (CLP)</b> | Eye Irrit. 2, H319    |

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.

The substances named in this section are given with their actual, appropriate classification!

For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

First-aiders should ensure they are protected!

Never pour anything into the mouth of an unconscious person!

#### Inhalation

Supply person with fresh air and consult doctor according to symptoms.

#### Skin contact

Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.

#### Eye contact

Remove contact lenses.

Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

#### Ingestion

Rinse the mouth thoroughly with water.

Give copious water to drink - consult doctor immediately.

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

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.

In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

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

Symptomatic treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Adapt to the nature and extent of fire.

Water jet spray/foam/CO<sub>2</sub>/dry extinguisher

#### Unsuitable extinguishing media

None known

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

In case of fire the following can develop:

Oxides of carbon

Toxic gases

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.

Protective respirator with independent air supply.

According to size of fire

Full protection, if necessary.

Cool container at risk with water.

Dispose of contaminated extinction water according to official regulations.

## SECTION 6: Accidental release measures

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

Keep unprotected persons away.

Ensure sufficient supply of air.

Avoid contact with eyes or skin.

If applicable, caution - risk of slipping.

### 6.2 Environmental precautions

If leakage occurs, dam up.

Resolve leaks if this possible without risk.

Prevent from entering drainage system.

Prevent surface and ground-water infiltration, as well as ground penetration.

If accidental entry into drainage system occurs, inform responsible authorities.

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

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth, sawdust) and dispose of according to Section 13.

### 6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

## SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

### 7.1 Precautions for safe handling

#### 7.1.1 General recommendations

Ensure good ventilation.

Avoid contact with eyes or skin.

Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.

Observe directions on label and instructions for use.

Use working methods according to operating instructions.

#### 7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

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

Keep out of access to unauthorised individuals.

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Not to be stored in gangways or stair wells.  
Store product closed and only in original packing.  
Store at room temperature.  
Store in a dry place.

### 7.3 Specific end use(s)

No information available at present.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

| GB | Chemical Name          | Talc                                                                      | Content %:                    |
|----|------------------------|---------------------------------------------------------------------------|-------------------------------|
|    | WEL-TWA:               | 1 mg/m <sup>3</sup> (res. dust)                                           | WEL-STEL: ---                 |
|    | Monitoring procedures: | ---                                                                       | ---                           |
|    | BMGV:                  | ---                                                                       | Other information: ---        |
| GB | Chemical Name          | Carbon black                                                              | Content %:                    |
|    | WEL-TWA:               | 3,5 mg/m <sup>3</sup>                                                     | WEL-STEL: 7 mg/m <sup>3</sup> |
|    | Monitoring procedures: | ---                                                                       | ---                           |
|    | BMGV:                  | ---                                                                       | Other information: ---        |
| GB | Chemical Name          | Silica, amorphous                                                         | Content %:                    |
|    | WEL-TWA:               | 6 mg/m <sup>3</sup> (total inh. dust), 2,4 mg/m <sup>3</sup> (resp. dust) | WEL-STEL: ---                 |
|    | Monitoring procedures: | ---                                                                       | ---                           |
|    | BMGV:                  | ---                                                                       | Other information: ---        |

| Carbon black        |                                            |                  |            |       |      |      |
|---------------------|--------------------------------------------|------------------|------------|-------|------|------|
| Area of application | Exposure route / Environmental compartment | Effect on health | Descriptor | Value | Unit | Note |
|                     | Environment - freshwater                   |                  | PNEC       | 1     | mg/l |      |
|                     | Environment - marine                       |                  | PNEC       | 0,1   | mg/l |      |

| Zeolites            |                                            |                             |            |       |                       |      |
|---------------------|--------------------------------------------|-----------------------------|------------|-------|-----------------------|------|
| Area of application | Exposure route / Environmental compartment | Effect on health            | Descriptor | Value | Unit                  | Note |
|                     | Environment - freshwater                   |                             | PNEC       | 3,2   | mg/l                  |      |
|                     | Environment - marine                       |                             | PNEC       | 0,32  | mg/l                  |      |
|                     | Environment - soil                         |                             | PNEC       | 600   | mg/kg dry weight      |      |
|                     | Environment - sewage treatment plant       |                             | PNEC       | 95    | mg/kg                 |      |
| Consumer            | Human - oral                               | Long term, systemic effects | DNEL       | 1,25  | mg/kg body weight/day |      |
| Consumer            | Human - dermal                             | Long term, systemic effects | DNEL       | 1,25  | mg/kg body weight/day |      |
| Workers / employees | Human - dermal                             | Long term, systemic effects | DNEL       | 2,5   | mg/kg body weight/day |      |
| Workers / employees | Human - inhalation                         | Long term, local effects    | DNEL       | 3     | mg/m <sup>3</sup>     |      |

GB WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany).  
(8) = Inhalable fraction (Directive 2017/164/EU, Directive 2004/37/CE). (9) = Respirable fraction (Directive 2017/164/EU, Directive

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2004/37/CE). (11) = Inhalable fraction (Directive 2004/37/CE). (12) = Inhalable fraction. Respirable fraction in those Member States that implement, on the date of the entry into force of this Directive, a biomonitoring system with a biological limit value not exceeding 0,002 mg Cd/g creatinine in urine (Directive 2004/37/CE). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period).

(8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.

\*\* = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision. (13) = The substance can cause sensitisation of the skin and of the respiratory tract (Directive 2004/37/CE), (14) = The substance can cause sensitisation of the skin (Directive 2004/37/CE).

## 8.2 Exposure controls

### 8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.

If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.

Applies only if maximum permissible exposure values are listed here.

Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.

These are specified by e.g. BS EN 14042.

BS EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

### 8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:

Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:

Chemical resistant protective gloves (EN 374).

If applicable

Protective gloves made of butyl (EN 374).

Protective Neoprene® / polychloroprene gloves (EN 374).

Protective nitrile gloves (EN 374).

Protective PVC gloves (EN 374).

Minimum layer thickness in mm:

0,5

Permeation time (penetration time) in minutes:

>= 480

The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions.

The recommended maximum wearing time is 50% of breakthrough time.

Protective hand cream recommended.

Skin protection - Other:

Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

Respiratory protection:

Normally not necessary.

Thermal hazards:

Not applicable

Additional information on hand protection - No tests have been performed.

In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.

Selection of materials derived from glove manufacturer's indications.

Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.

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Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.

In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.

The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

### 8.2.3 Environmental exposure controls

No information available at present.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|                                          |                           |
|------------------------------------------|---------------------------|
| Physical state:                          | Paste, liquid.            |
| Colour:                                  | Black                     |
| Odour:                                   | Characteristic            |
| Odour threshold:                         | Not determined            |
| pH-value:                                | Not determined            |
| Melting point/freezing point:            | Not determined            |
| Initial boiling point and boiling range: | Not determined            |
| Flash point:                             | Not determined            |
| Evaporation rate:                        | Not determined            |
| Flammability (solid, gas):               | n.a.                      |
| Lower explosive limit:                   | Not determined            |
| Upper explosive limit:                   | Not determined            |
| Vapour pressure:                         | Not determined            |
| Vapour density (air = 1):                | Not determined            |
| Density:                                 | 1,29 (relative density )  |
| Bulk density:                            | n.a.                      |
| Solubility(ies):                         | Not determined            |
| Water solubility:                        | Not determined            |
| Partition coefficient (n-octanol/water): | Not determined            |
| Auto-ignition temperature:               | Not determined            |
| Decomposition temperature:               | Not determined            |
| Viscosity:                               | 60 Pas                    |
| Explosive properties:                    | Product is not explosive. |
| Oxidising properties:                    | No                        |

### 9.2 Other information

|                           |                |
|---------------------------|----------------|
| Miscibility:              | Not determined |
| Fat solubility / solvent: | Not determined |
| Conductivity:             | Not determined |
| Surface tension:          | Not determined |
| Solvents content:         | Not determined |

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

The product has not been tested.

### 10.2 Chemical stability

Stable with proper storage and handling.

### 10.3 Possibility of hazardous reactions

No dangerous reactions are known.

### 10.4 Conditions to avoid

None known

### 10.5 Incompatible materials

Avoid contact with strong alkalis.

Avoid contact with strong oxidizing agents.

Avoid contact with strong acids.

### 10.6 Hazardous decomposition products

No decomposition when used as directed.

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Possibly more information on health effects, see Section 2.1 (classification).

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| Toxicity / effect                                             | Endpoint | Value | Unit | Organism | Test method | Notes  |
|---------------------------------------------------------------|----------|-------|------|----------|-------------|--------|
| Acute toxicity, by oral route:                                |          |       |      |          |             | n.d.a. |
| Acute toxicity, by dermal route:                              |          |       |      |          |             | n.d.a. |
| Acute toxicity, by inhalation:                                |          |       |      |          |             | n.d.a. |
| Skin corrosion/irritation:                                    |          |       |      |          |             | n.d.a. |
| Serious eye damage/irritation:                                |          |       |      |          |             | n.d.a. |
| Respiratory or skin sensitisation:                            |          |       |      |          |             | n.d.a. |
| Germ cell mutagenicity:                                       |          |       |      |          |             | n.d.a. |
| Carcinogenicity:                                              |          |       |      |          |             | n.d.a. |
| Reproductive toxicity:                                        |          |       |      |          |             | n.d.a. |
| Specific target organ toxicity - single exposure (STOT-SE):   |          |       |      |          |             | n.d.a. |
| Specific target organ toxicity - repeated exposure (STOT-RE): |          |       |      |          |             | n.d.a. |
| Aspiration hazard:                                            |          |       |      |          |             | n.d.a. |
| Symptoms:                                                     |          |       |      |          |             | n.d.a. |

#### 1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol

| Toxicity / effect                  | Endpoint | Value      | Unit  | Organism   | Test method                                                                                              | Notes           |
|------------------------------------|----------|------------|-------|------------|----------------------------------------------------------------------------------------------------------|-----------------|
| Acute toxicity, by oral route:     | LD50     | >2000-5000 | mg/kg | Rat        | OECD 401 (Acute Oral Toxicity)                                                                           |                 |
| Acute toxicity, by dermal route:   | LD50     | >2000      | mg/kg | Rat        | OECD 402 (Acute Dermal Toxicity)                                                                         |                 |
| Skin corrosion/irritation:         |          |            |       | Rabbit     | OECD 404 (Acute Dermal Irritation/Corrosion)                                                             | Not irritant    |
| Serious eye damage/irritation:     |          |            |       | Rabbit     | OECD 405 (Acute Eye Irritation/Corrosion)                                                                | Irritant        |
| Respiratory or skin sensitisation: |          |            |       | Guinea pig | OECD 406 (Skin Sensitisation)                                                                            | Not sensitising |
| Reproductive toxicity:             |          |            |       |            | OECD 421 (Reproduction/Developmental Toxicity Screening Test)                                            | Negative        |
| Reproductive toxicity:             |          |            |       |            | OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Developmental Toxicity Screening Test) | Negative        |

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| Toxicity / effect                | Endpoint | Value | Unit  | Organism | Test method                                  | Notes        |
|----------------------------------|----------|-------|-------|----------|----------------------------------------------|--------------|
| Acute toxicity, by oral route:   | LD50     | >5000 | mg/kg | Rat      |                                              |              |
| Acute toxicity, by dermal route: | LD50     | >2000 | mg/kg | Rat      |                                              |              |
| Skin corrosion/irritation:       |          |       |       | Rabbit   | OECD 404 (Acute Dermal Irritation/Corrosion) | Not irritant |

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|                                    |  |  |  |     |                                            |                            |
|------------------------------------|--|--|--|-----|--------------------------------------------|----------------------------|
| Skin corrosion/irritation:         |  |  |  |     |                                            | Not irritant               |
| Respiratory or skin sensitisation: |  |  |  |     |                                            | Not sensitising            |
| Germ cell mutagenicity:            |  |  |  |     | OECD 471 (Bacterial Reverse Mutation Test) | Negative                   |
| Carcinogenicity:                   |  |  |  |     |                                            | Negative                   |
| Reproductive toxicity:             |  |  |  | Rat |                                            | Negative                   |
| Symptoms:                          |  |  |  |     |                                            | mucous membrane irritation |

| Carbon black                                                        |          |        |       |            |                                              |                                      |
|---------------------------------------------------------------------|----------|--------|-------|------------|----------------------------------------------|--------------------------------------|
| Toxicity / effect                                                   | Endpoint | Value  | Unit  | Organism   | Test method                                  | Notes                                |
| Acute toxicity, by oral route:                                      | LD50     | >2000  | mg/kg | Rat        |                                              |                                      |
| Acute toxicity, by dermal route:                                    | LD50     | >3000  | mg/kg |            |                                              |                                      |
| Skin corrosion/irritation:                                          |          |        |       | Rabbit     | OECD 404 (Acute Dermal Irritation/Corrosion) | Not irritant                         |
| Serious eye damage/irritation:                                      |          |        |       | Rabbit     | OECD 405 (Acute Eye Irritation/Corrosion)    | Not irritant                         |
| Respiratory or skin sensitisation:                                  |          |        |       | Guinea pig | OECD 406 (Skin Sensitisation)                | Not sensitising                      |
| Germ cell mutagenicity:                                             |          |        |       |            | OECD 471 (Bacterial Reverse Mutation Test)   | Negative                             |
| Carcinogenicity:                                                    |          |        |       | Mouse      |                                              | Negative                             |
| Specific target organ toxicity - repeated exposure (STOT-RE):       | NOEL     | 0,0011 | mg/l  |            |                                              | References, Target organ(s): lung90d |
| Aspiration hazard:                                                  |          |        |       |            |                                              | No                                   |
| Specific target organ toxicity - repeated exposure (STOT-RE), oral: | NOAEL    | 137    | mg/kg | Mouse      |                                              |                                      |
| Specific target organ toxicity - repeated exposure (STOT-RE), oral: | NOAEL    | 52     | mg/kg | Rat        |                                              |                                      |

| Silica, amorphous                |          |        |       |          |                                                           |              |
|----------------------------------|----------|--------|-------|----------|-----------------------------------------------------------|--------------|
| Toxicity / effect                | Endpoint | Value  | Unit  | Organism | Test method                                               | Notes        |
| Acute toxicity, by oral route:   | LD50     | >5000  | mg/kg | Rat      | OECD 423 (Acute Oral Toxicity - Acute Toxic Class Method) |              |
| Acute toxicity, by dermal route: | LD50     | > 2000 | mg/kg | Rat      | OECD 402 (Acute Dermal Toxicity)                          |              |
| Skin corrosion/irritation:       |          |        |       | Rabbit   | OECD 404 (Acute Dermal Irritation/Corrosion)              | Not irritant |
| Serious eye damage/irritation:   |          |        |       | Rabbit   | OECD 405 (Acute Eye Irritation/Corrosion)                 | Not irritant |
| Germ cell mutagenicity:          |          |        |       |          | OECD 471 (Bacterial Reverse Mutation Test)                | Negative     |
| Aspiration hazard:               |          |        |       |          |                                                           | No           |

## SECTION 12: Ecological information

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Possibly more information on environmental effects, see Section 2.1 (classification).

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| Toxicity / effect                        | Endpoint | Time | Value | Unit | Organism | Test method | Notes  |
|------------------------------------------|----------|------|-------|------|----------|-------------|--------|
| 12.1. Toxicity to fish:                  |          |      |       |      |          |             | n.d.a. |
| 12.1. Toxicity to daphnia:               |          |      |       |      |          |             | n.d.a. |
| 12.1. Toxicity to algae:                 |          |      |       |      |          |             | n.d.a. |
| 12.2. Persistence and degradability:     |          |      |       |      |          |             | n.d.a. |
| 12.3. Bioaccumulative potential:         |          |      |       |      |          |             | n.d.a. |
| 12.4. Mobility in soil:                  |          |      |       |      |          |             | n.d.a. |
| 12.5. Results of PBT and vPvB assessment |          |      |       |      |          |             | n.d.a. |
| 12.6. Other adverse effects:             |          |      |       |      |          |             | n.d.a. |

#### 1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol

| Toxicity / effect                    | Endpoint  | Time  | Value | Unit | Organism                | Test method                                                                              | Notes                |
|--------------------------------------|-----------|-------|-------|------|-------------------------|------------------------------------------------------------------------------------------|----------------------|
| 12.2. Persistence and degradability: | BOD       | 28d   | 9     | %    |                         | OECD 301 E (Ready Biodegradability - Modified OECD Screening Test)                       | Hardly biodegradable |
| 12.3. Bioaccumulative potential:     | Log Pow   |       | -2,08 |      |                         |                                                                                          |                      |
| 12.1. Toxicity to fish:              | LC50      | 48h   | >100  | mg/l | Leuciscus idus          | DIN 38412 T.15                                                                           | Analogous conclusion |
| 12.1. Toxicity to daphnia:           | EC50      | 48h   | >100  | mg/l | Daphnia magna           | 92/69/EC                                                                                 | Analogous conclusion |
| 12.1. Toxicity to daphnia:           | NOEC/NOEL | 21d   | >=10  | mg/l | Daphnia magna           | OECD 211 (Daphnia magna Reproduction Test)                                               | Analogous conclusion |
| 12.1. Toxicity to algae:             | EC50      | 72h   | >100  | mg/l | Desmodesmus subspicatus | 84/449/EEC C.3                                                                           | Analogous conclusion |
| Toxicity to bacteria:                | NOEC/NOEL | 3h    | 700   | mg/l | activated sludge        | ISO 8192                                                                                 |                      |
| Toxicity to bacteria:                | EC20      | 30min | 1000  | mg/l | activated sludge        | OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation)) |                      |
| Other information:                   | COD       |       | 2040  | mg/g |                         |                                                                                          |                      |

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| Toxicity / effect                        | Endpoint | Time | Value | Unit | Organism | Test method | Notes                                  |
|------------------------------------------|----------|------|-------|------|----------|-------------|----------------------------------------|
| Water solubility:                        |          |      | <0,1  | %    |          |             |                                        |
| 12.2. Persistence and degradability:     |          |      |       |      |          |             | Not relevant for inorganic substances. |
| 12.5. Results of PBT and vPvB assessment |          |      |       |      |          |             | No PBT substance, No vPvB substance    |

#### Carbon black

| Toxicity / effect | Endpoint | Time | Value | Unit | Organism | Test method | Notes |
|-------------------|----------|------|-------|------|----------|-------------|-------|
|-------------------|----------|------|-------|------|----------|-------------|-------|

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|                                         |           |     |       |      |                            |                                                                                                      |                                                          |
|-----------------------------------------|-----------|-----|-------|------|----------------------------|------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| Water solubility:                       |           |     |       |      |                            |                                                                                                      | Insoluble,<br>Product floats<br>on the water<br>surface. |
| 12.1. Toxicity to fish:                 | LC50      | 96h | >1000 | mg/l | Brachydanio rerio          | OECD 203<br>(Fish, Acute<br>Toxicity Test)                                                           |                                                          |
| 12.1. Toxicity to<br>daphnia:           | EC50      | 24h | >5600 | mg/l | Daphnia magna              | OECD 202<br>(Daphnia sp.<br>Acute<br>Immobilisation<br>Test)                                         |                                                          |
| 12.1. Toxicity to algae:                | NOEC/NOEL | 3d  | 10000 | mg/l | Scenedesmus<br>subspicatus | OECD 201<br>(Alga, Growth<br>Inhibition Test)                                                        |                                                          |
| 12.2. Persistence and<br>degradability: |           |     |       |      |                            |                                                                                                      | Not<br>biodegradable                                     |
| 12.3. Bioaccumulative<br>potential:     |           |     |       |      |                            |                                                                                                      | Not to be<br>expected                                    |
| Toxicity to bacteria:                   | EC0       | 3h  | >=800 | mg/l | activated sludge           | Regulation (EC)<br>440/2008 C.22<br>(SOIL<br>MICROORGANI<br>SMS - CARBON<br>TRANSFORMAT<br>ION TEST) |                                                          |

| Silica, amorphous                           |          |      |             |      |                            |                                                              |                                                                                                                  |
|---------------------------------------------|----------|------|-------------|------|----------------------------|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Toxicity / effect                           | Endpoint | Time | Value       | Unit | Organism                   | Test method                                                  | Notes                                                                                                            |
| 12.1. Toxicity to fish:                     | EC0      | 96h  | >10000      | mg/l | Brachydanio rerio          | OECD 203<br>(Fish, Acute<br>Toxicity Test)                   |                                                                                                                  |
| 12.1. Toxicity to<br>daphnia:               | EC0      | 24h  | >1000       | mg/l | Daphnia magna              | OECD 202<br>(Daphnia sp.<br>Acute<br>Immobilisation<br>Test) |                                                                                                                  |
| 12.1. Toxicity to algae:                    | ErC50    | 72h  | >=1000<br>0 | mg/l | Scenedesmus<br>subspicatus | OECD 201<br>(Alga, Growth<br>Inhibition Test)                |                                                                                                                  |
| 12.2. Persistence and<br>degradability:     |          |      |             |      |                            |                                                              | Inorganic<br>products<br>cannot be<br>eliminated from<br>water through<br>biological<br>purification<br>methods. |
| 12.5. Results of PBT<br>and vPvB assessment |          |      |             |      |                            |                                                              | No PBT<br>substance, No<br>vPvB substance                                                                        |

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### For the substance / mixture / residual amounts

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product.  
Owing to the user's specific conditions for use and disposal, other waste codes may be  
allocated under certain circumstances. (2014/955/EU)

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08 04 09 waste adhesives and sealants containing organic solvents or other hazardous substances

Recommendation:

Sewage disposal shall be discouraged.

Pay attention to local and national official regulations.

E.g. suitable incineration plant.

E.g. dispose at suitable refuse site.

### For contaminated packing material

Pay attention to local and national official regulations.

Empty container completely.

Uncontaminated packaging can be recycled.

Dispose of packaging that cannot be cleaned in the same manner as the substance.

## SECTION 14: Transport information

### General statements

14.1. UN number: n.a.

### Transport by road/by rail (ADR/RID)

14.2. UN proper shipping name:

14.3. Transport hazard class(es): n.a.

14.4. Packing group: n.a.

Classification code: n.a.

LQ: n.a.

14.5. Environmental hazards: Not applicable

Tunnel restriction code:

### Transport by sea (IMDG-code)

14.2. UN proper shipping name:

14.3. Transport hazard class(es): n.a.

14.4. Packing group: n.a.

Marine Pollutant: n.a.

14.5. Environmental hazards: Not applicable

### Transport by air (IATA)

14.2. UN proper shipping name:

14.3. Transport hazard class(es): n.a.

14.4. Packing group: n.a.

14.5. Environmental hazards: Not applicable

### 14.6. Special precautions for user

Unless specified otherwise, general measures for safe transport must be followed.

### 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Non-dangerous material according to Transport Regulations.

## SECTION 15: Regulatory information

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

Observe restrictions:

Comply with trade association/occupational health regulations.

Directive 2010/75/EU (VOC): < 0,3 %

### 15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

## SECTION 16: Other information

Revised sections: n.a.

These details refer to the product as it is delivered.

Employee instruction/training in handling hazardous materials is required.

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## Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

| Classification in accordance with regulation (EC) No. 1272/2008 (CLP) | Evaluation method used                             |
|-----------------------------------------------------------------------|----------------------------------------------------|
| Eye Irrit. 2, H319                                                    | Classification according to calculation procedure. |

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).  
H319 Causes serious eye irritation.

Eye Irrit. — Eye irritation

### Any abbreviations and acronyms used in this document:

acc., acc. to according, according to  
ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)  
AOX Adsorbable organic halogen compounds  
approx. approximately  
Art., Art. no. Article number  
ASTM ASTM International (American Society for Testing and Materials)  
BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)  
BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)  
BSEF The International Bromine Council  
bw body weight  
CAS Chemical Abstracts Service  
CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)  
CMR carcinogenic, mutagenic, reproductive toxic  
DMEL Derived Minimum Effect Level  
DNEL Derived No Effect Level  
dw dry weight  
e.g. for example (abbreviation of Latin 'exempli gratia'), for instance  
EC European Community  
ECHA European Chemicals Agency  
EEC European Economic Community  
EINECS European Inventory of Existing Commercial Chemical Substances  
ELINCS European List of Notified Chemical Substances  
EN European Norms  
EPA United States Environmental Protection Agency (United States of America)  
etc. et cetera  
EU European Union  
EVAL Ethylene-vinyl alcohol copolymer  
Fax. Fax number  
gen. general  
GHS Globally Harmonized System of Classification and Labelling of Chemicals  
GWP Global warming potential  
IARC International Agency for Research on Cancer  
IATA International Air Transport Association  
IBC (Code) International Bulk Chemical (Code)  
IMDG-code International Maritime Code for Dangerous Goods  
incl. including, inclusive  
IUCLID International Uniform Chemical Information Database  
LQ Limited Quantities  
MARPOL International Convention for the Prevention of Marine Pollution from Ships  
n.a. not applicable  
n.av. not available

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n.c. not checked  
n.d.a. no data available  
OECD Organisation for Economic Co-operation and Development  
org. organic  
PBT persistent, bioaccumulative and toxic  
PE Polyethylene  
PNEC Predicted No Effect Concentration  
ppm parts per million  
PVC Polyvinylchloride  
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)  
REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.  
RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)  
SVHC Substances of Very High Concern  
Tel. Telephone  
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods  
VOC Volatile organic compounds  
vPvB very persistent and very bioaccumulative  
wwt wet weight

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.

No responsibility.

These statements were made by:

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