

Creation Date 21-May-2012

Revision Date 23-Apr-2025

Revision Number 10

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

### 1.1. Product identifier

Product Description: Sodium borohydride, 0.5 M solution in diglyme  
Cat No. : 191130000; 191131000

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

Recommended Use Laboratory chemicals. Scientific research and development. REACH (1907/2006) - Annex XIV.  
Uses advised against All other uses

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

#### Company

**UK entity/business name**  
Fisher Scientific UK  
Bishop Meadow Road,  
Loughborough, Leicestershire LE11 5RG, United Kingdom

**EU entity/business name**  
Thermo Fisher Scientific  
Janssen Pharmaceuticaaan 3a, 2440 Geel, Belgium

E-mail address begel.sdsdesk@thermofisher.com

### 1.4. Emergency telephone number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

#### GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

##### Physical hazards

Based on available data, the classification criteria are not met

##### Health hazards

Skin Corrosion/Irritation  
Serious Eye Damage/Eye Irritation  
Reproductive Toxicity

Category 2 (H315)  
Category 2 (H319)  
Category 1B (H360FD)

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## Environmental hazards

Based on available data, the classification criteria are not met

Full text of Hazard Statements: see section 16

## 2.2. Label elements



Signal Word

Danger

## Hazard Statements

H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H360FD - May damage fertility. May damage the unborn child  
EUH019 - May form explosive peroxides  
Combustible liquid

## Precautionary Statements

P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P308 + P313 - IF exposed or concerned: Get medical advice/attention  
P332 + P313 - If skin irritation occurs: Get medical advice/attention

## Additional EU labelling

Restricted to professional users

## 2.3. Other hazards

This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT)  
This preparation contains no substance considered to be very persistent nor very bioaccumulating (vPvB)  
This product does not contain any known or suspected endocrine disruptors

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2. Mixtures

| Component                        | CAS No     | EC No             | Weight % | GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567                                    |
|----------------------------------|------------|-------------------|----------|--|
| Diethylene glycol dimethyl ether | 111-96-6   | EEC No. 203-924-4 | 98       | Flam. Liq. 3 (H226)<br>Repr. 1B (H360FD)<br>[EUH019]   |
| Sodium borohydride               | 16940-66-2 | EEC No. 241-004-4 | 2        | Water-react. 1 (H260)<br>Acute Tox. 3 (H301)<br>Skin Corr. 1C (H314)<br>Eye Dam. 1 (H318)<br>Repr. 1B (H360FD)<br>(EUH014) |

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| Component          | Specific concentration limits (SCL's) | M-Factor | Component notes |
|--------------------|---------------------------------------|----------|-----------------|
| Sodium borohydride | >=3.4% Repr. 1B                       | -        | -               |

Full text of Hazard Statements: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

|   |  |
|---|--|
| <b>General Advice</b>                     | Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.  |
| <b>Eye Contact</b>                        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.   |
| <b>Skin Contact</b>                       | Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.  |
| <b>Ingestion</b>                          | Do NOT induce vomiting. Call a physician or poison control center immediately.   |
| <b>Inhalation</b>                         | Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. |
| <b>Self-Protection of the First Aider</b> | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.   |

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

Difficulty in breathing. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

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

|                           |                        |
|---------------------------|------------------------|
| <b>Notes to Physician</b> | Treat symptomatically. |
|---------------------------|------------------------|

## SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

#### Suitable Extinguishing Media

CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam. Water mist may be used to cool closed containers.

#### Extinguishing media which must not be used for safety reasons

Water.

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

Combustible material. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

#### Hazardous Combustion Products

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Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Hydrogen, Oxides of boron, Sodium oxides.

## **5.3. Advice for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

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

Ensure adequate ventilation. Use personal protective equipment as required. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Remove all sources of ignition. Take precautionary measures against static discharges.

### **6.2. Environmental precautions**

Should not be released into the environment. See Section 12 for additional Ecological Information.

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

Keep in suitable, closed containers for disposal. Soak up with inert absorbent material. Do not expose spill to water. Remove all sources of ignition.

### **6.4. Reference to other sections**

Refer to protective measures listed in Sections 8 and 13.

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

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

Do not get in eyes, on skin, or on clothing. Wear personal protective equipment/face protection. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance. Do not allow contact with water. Handle under an inert atmosphere. If peroxide formation is suspected, do not open or move container. Keep away from open flames, hot surfaces and sources of ignition.

#### **Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

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

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Keep away from acids. Keep from any possible contact with water. Do not store in metal or glass containers. Keep under nitrogen. Keep away from oxidizing agents. Containers should be dated when opened and tested periodically for the presence of peroxides. Should crystals form in a peroxidizable liquid, peroxidation may have occurred and the product should be considered extremely dangerous. In this instance, the container should only be opened remotely by professionals. Keep away from water or moist air. Store under an inert atmosphere. Protect from moisture.

**Technical Rules for Hazardous Substances (TRGS) 510**  
**Storage Class (LGK) (Germany)**

Class 6.1C

### **7.3. Specific end use(s)**

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Use in laboratories

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### Exposure limits

List source(s):

#### Biological limit values

List source(s):

#### Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

| Component                              | Acute effects local (Oral) | Acute effects systemic (Oral) | Chronic effects local (Oral) | Chronic effects systemic (Oral) |
|--|----------------------------|-------------------------------|------------------------------|---------------------------------|
| Sodium borohydride<br>16940-66-2 ( 2 ) |                            |                               |                              | 0.17 mg/kg bw/day               |

| Component   | Acute effects local (Dermal) | Acute effects systemic (Dermal) | Chronic effects local (Dermal) | Chronic effects systemic (Dermal) |
|---|------------------------------|---------------------------------|--------------------------------|-----------------------------------|
| Diethylene glycol dimethyl ether<br>111-96-6 ( 98 ) |                              |                                 |                                | DNEL = 2.08mg/kg bw/day           |
| Sodium borohydride<br>16940-66-2 ( 2 )              |                              |                                 |                                | DNEL = 240mg/kg bw/day            |

| Component   | Acute effects local (Inhalation) | Acute effects systemic (Inhalation) | Chronic effects local (Inhalation) | Chronic effects systemic (Inhalation) |
|---|----------------------------------|-------------------------------------|------------------------------------|---------------------------------------|
| Diethylene glycol dimethyl ether<br>111-96-6 ( 98 ) |                                  |                                     |                                    | DNEL = 26.8mg/m <sup>3</sup>          |
| Sodium borohydride<br>16940-66-2 ( 2 )              |                                  |                                     |                                    | DNEL = 5.1mg/m <sup>3</sup>           |

#### Predicted No Effect Concentration (PNEC)

See values below.

| Component   | Fresh water     | Fresh water sediment         | Water Intermittent | Microorganisms in sewage treatment | Soil (Agriculture)       |
|---|-----------------|------------------------------|--------------------|------------------------------------|--------------------------|
| Diethylene glycol dimethyl ether<br>111-96-6 ( 98 ) | PNEC = 6.4mg/L  | PNEC = 27.4mg/kg sediment dw | PNEC = 9.43mg/L    | PNEC = 50mg/L                      | PNEC = 1.72mg/kg soil dw |
| Sodium borohydride<br>16940-66-2 ( 2 )              | PNEC = 1.75mg/L | PNEC = 2.55mg/kg sediment dw | PNEC = 1.75mg/L    | PNEC = 54.77mg/L                   | PNEC = 4.8mg/kg soil dw  |

| Component   | Marine water    | Marine water sediment         | Marine water intermittent | Food chain            | Air |
|---|-----------------|-------------------------------|---------------------------|-----------------------|-----|
| Diethylene glycol dimethyl ether<br>111-96-6 ( 98 ) | PNEC = 0.64mg/L | PNEC = 2.74mg/kg sediment dw  |                           | PNEC = 2.77mg/kg food |     |
| Sodium borohydride<br>16940-66-2 ( 2 )              | PNEC = 1.75mg/L | PNEC = 0.255mg/kg sediment dw |                           |                       |     |

### 8.2. Exposure controls

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## Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting equipment.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

## Personal protective equipment

### Eye Protection

Goggles (European standard - EN 166)

### Hand Protection

Protective gloves

| Glove material | Breakthrough time | Glove thickness | EU standard | Glove comments        |
|----------------|-------------------|-----------------|-------------|-----------------------|
| Natural rubber | See manufacturers | -               | EN 374      | (minimum requirement) |
| Nitrile rubber | recommendations   |                 |             |                       |
| Neoprene       |                   |                 |             |                       |
| PVC            |                   |                 |             |                       |

### Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

### Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

### Large scale/emergency use

Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

**Recommended Filter type:** Organic gases and vapours filter Type A Brown conforming to EN14387

### Small scale/Laboratory use

Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Recommended half mask:-** Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141

When RPE is used a face piece Fit Test should be conducted

### Environmental exposure controls

No information available.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

|                          |                              |                       |
|--------------------------|------------------------------|-----------------------|
| Physical State           | Liquid                       |                       |
| Appearance               | Colorless                    |                       |
| Odor                     | No information available     |                       |
| Odor Threshold           | No data available            |                       |
| Melting Point/Range      | No data available            |                       |
| Softening Point          | No data available            |                       |
| Boiling Point/Range      | No information available     |                       |
| Flammability (liquid)    | Combustible liquid Flammable | On basis of test data |
| Flammability (solid,gas) | Not applicable               | Liquid                |
| Explosion Limits         | No data available            |                       |

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|   |                          |                                   |
|---|--------------------------|-----------------------------------|
| Flash Point                             | 69 °C / 156.2 °F         | Method - No information available |
| Autoignition Temperature                | No data available        |                                   |
| Decomposition Temperature               | No data available        |                                   |
| pH                                      | Not applicable           |                                   |
| Viscosity                               | No data available        |                                   |
| Water Solubility                        | Reacts with water        |                                   |
| Solubility in other solvents            | No information available |                                   |
| Partition Coefficient (n-octanol/water) |                          |                                   |
| Component                               | log Pow                  |                                   |
| Diethylene glycol dimethyl ether        | -0.36                    |                                   |
| Vapor Pressure                          | No information available |                                   |
| Density / Specific Gravity              | 0.945                    |                                   |
| Bulk Density                            | Not applicable           | Liquid                            |
| Vapor Density                           | No information available | (Air = 1.0)                       |
| Particle characteristics                | Not applicable (liquid)  |                                   |

## 9.2. Other information

|  |  |
|--|--|
| Explosive Properties   | explosive air/vapour mixtures possible |
| Substances/mixtures which, in contact with water, emit flammable gases | Emitted gas ignites spontaneously      |

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

Yes

### 10.2. Chemical stability

Stable under normal conditions. Hygroscopic.

### 10.3. Possibility of hazardous reactions

|                          |  |
|--------------------------|--|
| Hazardous Polymerization | Hazardous polymerization does not occur. |
| Hazardous Reactions      | None under normal processing.            |

### 10.4. Conditions to avoid

Burning produces obnoxious and toxic fumes. Keep away from open flames, hot surfaces and sources of ignition. Excess heat. Incompatible products. Exposure to moist air or water. Exposure to moisture.

### 10.5. Incompatible materials

Acids. Water. Strong oxidizing agents. Alcohols. Alkaline. Finely powdered metals. Aldehydes. Metals. copper. halogenated agents.

### 10.6. Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Hydrogen. Oxides of boron. Sodium oxides.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

|                     |   |
|---------------------|---|
| Product Information | No acute toxicity information is available for this product |
|---------------------|---|

(a) acute toxicity;

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Oral No data available  
Dermal No data available  
Inhalation No data available

## Toxicology data for the components

| Component                        | LD50 Oral                 | LD50 Dermal               | LC50 Inhalation                            |
|----------------------------------|---------------------------|---------------------------|--|
| Diethylene glycol dimethyl ether | LD50 = 7500 mg/kg ( Rat ) | LD50 > 6900 mg/kg ( Rat ) | LC50 > 11000 mg/m <sup>3</sup> ( Rat ) 7 h |
| Sodium borohydride               | 57 mg/kg ( Rat )          | >2000 mg/kg ( Rabbit )    | LC50 > 5.18 mg/L ( Rat ) 1 h               |

(b) skin corrosion/irritation; Category 2

(c) serious eye damage/irritation; Category 2

(d) respiratory or skin sensitization;

Respiratory No data available  
Skin No data available

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity;  
Teratogenicity

Category 1B  
Teratogenic effects have occurred in experimental animals.

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available

Target Organs None known.

(j) aspiration hazard; No data available

Other Adverse Effects The toxicological properties have not been fully investigated.

Symptoms / effects, both acute and delayed Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

## 11.2. Information on other hazards

Endocrine Disrupting Properties Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

#### Ecotoxicity effects

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Do not empty into drains. Reacts with water so no ecotoxicity data for the substance is available.



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| Component                        | Freshwater Fish  | Water Flea | Freshwater Algae |
|----------------------------------|--|------------|------------------|
| Diethylene glycol dimethyl ether | Rainbow trout: LC50 = 9845 mg/L/96h<br>Fathaed Minnow: LC50 = 8569 mg/L 96h<br>Bluegill/Sunfish: LC50 = 10928 mg/L 96h |            |                  |

| Component                        | Microtox                      | M-Factor |
|----------------------------------|-------------------------------|----------|
| Diethylene glycol dimethyl ether | Daphnia: EC50 = 5868 mg/L 96h |          |

## 12.2. Persistence and degradability

**Persistence** Persistence is unlikely.  
**Degradability** Decomposes in contact with water.

| Component   | Degradability        |
|---|----------------------|
| Diethylene glycol dimethyl ether<br>111-96-6 ( 98 ) | >99% 36d (OECD 302B) |

## 12.3. Bioaccumulative potential

Bioaccumulation is unlikely

| Component                        | log Pow | Bioconcentration factor (BCF) |
|----------------------------------|---------|-------------------------------|
| Diethylene glycol dimethyl ether | -0.36   | No data available             |

## 12.4. Mobility in soil

The product is water soluble, and may spread in water systems. Will likely be mobile in the environment due to its water solubility. Is not likely mobile in the environment. Highly mobile in soils

## 12.5. Results of PBT and vPvB assessment

This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This preparation contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

## 12.6. Endocrine disrupting properties

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors

## 12.7. Other adverse effects

**Persistent Organic Pollutant**  
**Ozone Depletion Potential**

This product does not contain any known or suspected substance  
This product does not contain any known or suspected substance

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

**Waste from Residues/Unused Products**

Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

**Contaminated Packaging**

Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.

**European Waste Catalogue (EWC)**

According to the European Waste Catalog, Waste Codes are not product specific, but application specific.

**Other Information**

Waste codes should be assigned by the user based on the application for which the product

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was used. Do not flush to sewer. Can be landfilled or incinerated, when in compliance with local regulations.

## SECTION 14: TRANSPORT INFORMATION

**IMDG/IMO** Not regulated

**14.1. UN number**  
**14.2. UN proper shipping name**  
**14.3. Transport hazard class(es)**  
**14.4. Packing group**

**ADR** Not regulated

**14.1. UN number**  
**14.2. UN proper shipping name**  
**14.3. Transport hazard class(es)**  
**14.4. Packing group**

**IATA** Not regulated

**14.1. UN number**  
**14.2. UN proper shipping name**  
**14.3. Transport hazard class(es)**  
**14.4. Packing group**

**14.5. Environmental hazards** No hazards identified

**14.6. Special precautions for user** No special precautions required.

**14.7. Maritime transport in bulk according to IMO instruments** Not applicable, packaged goods

## SECTION 15: REGULATORY INFORMATION

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

### International Inventories

X = listed. US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

| Component                        | CAS No     | EINECS    | ELINCS | NLP | IECSC | TCSI | KECL     | ENCS | ISHL |
|----------------------------------|------------|-----------|--------|-----|-------|------|----------|------|------|
| Diethylene glycol dimethyl ether | 111-96-6   | 203-924-4 | -      | -   | X     | X    | KE-27705 | X    | X    |
| Sodium borohydride               | 16940-66-2 | 241-004-4 | -      | -   | X     | X    | KE-31365 | X    | X    |

| Component                        | CAS No     | TSCA | TSCA Inventory notification - Active-Inactive | DSL | NDSL | AICS | NZIoC | PICCS |
|----------------------------------|------------|------|---|-----|------|------|-------|-------|
| Diethylene glycol dimethyl ether | 111-96-6   | X    | ACTIVE  | X   | -    | X    | X     | X     |
| Sodium borohydride               | 16940-66-2 | X    | ACTIVE  | X   | -    | X    | X     | X     |

**Legend:** X - Listed '-' - Not Listed

**KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

**Authorisation/Restrictions according to EU REACH**

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| Component                        | CAS No     | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization   | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances  | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|----------------------------------|------------|---|--|---|
| Diethylene glycol dimethyl ether | 111-96-6   | Toxic for reproduction Category 1B, Article 57<br>Application date: February 22, 2016<br>Sunset date: August 22, 2017<br>Exemption - None | Use restricted. See entry 30.<br>(see link for restriction details)<br>Use restricted. See entry 75.<br>(see link for restriction details) | SVHC Candidate list - Toxic for reproduction (Article 57c)  |
| Sodium borohydride               | 16940-66-2 | -   | -  | -   |

After the sunset date the use of this substance requires either an authorization or can only be used for exempted uses, e.g. use in scientific research and development which includes routine analytics or use as intermediate.

## REACH links

<https://echa.europa.eu/authorisation-list>

<https://echa.europa.eu/substances-restricted-under-reach>

<https://echa.europa.eu/candidate-list-table>

## Seveso III Directive (2012/18/EC)

| Component                        | CAS No     | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements |
|----------------------------------|------------|---|--|
| Diethylene glycol dimethyl ether | 111-96-6   | Not applicable  | Not applicable   |
| Sodium borohydride               | 16940-66-2 | Not applicable  | Not applicable   |

## Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

## Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

Take note of Directive 94/33/EC on the protection of young people at work

Take note of Dir 92/85/EC on the protection of pregnant and breastfeeding women at work

## National Regulations

**UK** - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

## WGK Classification

Water endangering class = 1 (self classification)

| Component                        | Germany - Water Classification (AwSV) | Germany - TA-Luft Class |
|----------------------------------|---------------------------------------|-------------------------|
| Diethylene glycol dimethyl ether | WGK1                                  |                         |
| Sodium borohydride               | WGK2                                  |                         |

| Component                        | France - INRS (Tables of occupational diseases)      |
|----------------------------------|--|
| Diethylene glycol dimethyl ether | Tableaux des maladies professionnelles (TMP) - RG 84 |

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| Component   | Switzerland - Ordinance on the Reduction of Risk from handling of hazardous substances preparation (SR 814.81) | Switzerland - Ordinance on Incentive Taxes on Volatile Organic Compounds (OVOC) | Switzerland - Ordinance of the Rotterdam Convention on the Prior Informed Consent Procedure |
|---|--|---|---|
| Diethylene glycol dimethyl ether<br>111-96-6 ( 98 ) | Prohibited and Restricted Substances   | Group I   |   |

## 15.2. Chemical safety assessment

Chemical Safety Assessment/Reports (CSA/CSR) are not required for mixtures

## SECTION 16: OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3

H226 - Flammable liquid and vapor  
H250 - Catches fire spontaneously if exposed to air  
H301 - Toxic if swallowed  
H314 - Causes severe skin burns and eye damage  
H315 - Causes skin irritation  
H318 - Causes serious eye damage  
H319 - Causes serious eye irritation  
H360FD - May damage fertility. May damage the unborn child  
EUH014 - Reacts violently with water  
EUH019 - May form explosive peroxides

### Legend

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**NOEC** - No Observed Effect Concentration

**PBT** - Persistent, Bioaccumulative, Toxic

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer  
Predicted No Effect Concentration (PNEC)

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**POW** - Partition coefficient Octanol:Water

**vPvB** - very Persistent, very Bioaccumulative

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

### Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate

**VOC** - (Volatile Organic Compound)

### Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

**Physical hazards** On basis of test data

**Health Hazards** Calculation method

**Environmental hazards** Calculation method

### Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and

# SAFETY DATA SHEET

Sodium borohydride, 0.5 M solution in diglyme

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hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

|                  |                       |
|------------------|-----------------------|
| Creation Date    | 21-May-2012           |
| Revision Date    | 23-Apr-2025           |
| Revision Summary | SDS sections updated. |

**This safety data sheet complies with Regulation UK SI 2019/758 and UK SI 2020/1577 as amended.**

## Disclaimer

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**End of Safety Data Sheet**