

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

#### 1.1. Product identifier

Product form	: Substance
Trade name	: POLY-G HQEE®
Chemical name	: HYDROQUINONE BIS (2-HYDROXYETHYL) ETHER
IUPAC name	: 2,2'-p-phenylenedioxydiethanol
EC-No.	: 203-197-3
CAS-No.	: 104-38-1
REACH registration No	: 01-2119971082-41-0000
Type of product	: Pure substance, Hygroscopic substance. Preventive measures apply to the substance in dry state only
Formula	: C <sub>10</sub> H <sub>14</sub> O <sub>4</sub>
Synonyms	: 2,2'-[1,4-phenylenebis(oxy)]bisethanol / 2,2'-para-phenylenedioxydiethanol / 2,2'-p-phenylenedioxydiethanol / ethanol, 2,2'-[1,4-phenylenebis(oxy)]bis- / HQEE (=hydroquinone bis(2-hydroxyethyl)ether) / hydroquinone bis(2-hydroxyethyl)ether / hydroquinone di-(beta-hydroxyethyl)ether
Product group	: Trade product
BIG No	: 25950

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

##### 1.2.1. Relevant identified uses

Industrial/Professional use spec	: Industrial For professional use only
Use of the substance/mixture	: Chemical intermediate

##### 1.2.2. Uses advised against

No additional information available

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

##### Manufacturer

Monument Chemical  
2450 Olin Road  
US- 40108 Brandenburg, KY  
USA  
T (270)422-6860  
[sds@monumentchemical.com](mailto:sds@monumentchemical.com) - [www.monumentchemical.com](http://www.monumentchemical.com)

##### Distributor

Monument Chemical B.V.  
Ketenislaan 3  
BE- B-9130 Kallo  
Belgium  
T +32 3 570 28 11  
[sds@monumentchemical.com](mailto:sds@monumentchemical.com) - [www.monumentchemical.com](http://www.monumentchemical.com)

#### 1.4. Emergency telephone number

Emergency number	: 24 HR CHEMTREC: 1-800-424-9300 (International +1 703-741-5970); 24 HR Emergency Assistance: 1-270-422-6860
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### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Not classified

##### Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

#### 2.2. Label elements

According to EC directives or the corresponding national regulations there is no labelling obligation for this product.  
No labelling applicable

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### 2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Contains no PBT/vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

Component	
HYDROQUINONE BIS (2-HYDROXYETHYL) ETHER (104-38-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Hydroquinone (123-31-9)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Substance type	: Mono-constituent
Chemical name	: HYDROQUINONE BIS (2-HYDROXYETHYL) ETHER
CAS-No.	: 104-38-1
EC-No.	: 203-197-3

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
HYDROQUINONE BIS (2-HYDROXYETHYL) ETHER	CAS-No.: 104-38-1 EC-No.: 203-197-3	89 – 100	Not classified
2-(4-(2-(2-HYDROXYETHOXY)ETHOXY)PHENOXY)ETHANOL	CAS-No.: 849677-06-1	0 – 8	Not classified
4-(2-hydroxyethoxy)phenol	CAS-No.: 13427-53-7	0 – 2	Not classified
Hydroquinone	CAS-No.: 123-31-9 EC-No.: 204-617-8 EC Index-No.: 604-005-00-4	< 0.4	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Skin Sens. 1, H317 Muta. 2, H341 Carc. 2, H351 Aquatic Acute 1, H400 (M=10)

Full text of H- and EUH-statements: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.
First-aid measures after inhalation	: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact	: Rinse with water. Soap may be used. Take victim to a doctor if irritation persists.
First-aid measures after eye contact	: Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply (chemical) neutralizing agents without medical advice.

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First-aid measures after ingestion : Rinse mouth with water. Call Poison Information Centre ([www.big.be/antigif.html](http://www.big.be/antigif.html)). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital.

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

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.  
Symptoms/effects after inhalation : No effects known.  
Symptoms/effects after skin contact : Dry skin.  
Symptoms/effects after eye contact : Slight irritation.  
Symptoms/effects after ingestion : No effects known.  
Symptoms/effects upon intravenous administration : No effects known.  
Chronic symptoms : No effects known.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Quick-acting ABC powder extinguisher. Class A foam extinguisher. Water (quick-acting extinguisher, reel). Water. Class A foam.  
Unsuitable extinguishing media : Quick-acting BC powder extinguisher. Quick-acting CO2 extinguisher.

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

Fire hazard : DIRECT FIRE HAZARD: Not easily combustible. In finely divided state: increased fire hazard. INDIRECT FIRE HAZARD: Temperature above flashpoint: higher fire/explosion hazard.  
Explosion hazard : DIRECT EXPLOSION HAZARD: Fine dust is explosive with air. INDIRECT EXPLOSION HAZARD: Dust cloud can be ignited by a spark.  
Hazardous decomposition products in case of fire : Upon combustion: CO and CO2 are formed.

### 5.3. Advice for firefighters

Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: have neighbourhood close doors and windows.  
Firefighting instructions : No specific fire-fighting instructions required.  
Protection during firefighting : Heat/fire exposure: self-contained breathing apparatus (EN 136 + EN 137).

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

Protective equipment : Gloves (EN 374). Protective clothing (EN 14605 or EN 13034). Dust cloud production: self-contained breathing apparatus (EN 136 + EN 137).  
Emergency procedures : Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes.  
Measures in case of dust release : In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".  
Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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

- For containment : Contain released product, collect/pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray. Powdered form: no compressed air for pumping over spills.
- Methods for cleaning up : Stop dust cloud by humidifying. Scoop solid spill into closing containers. Powdered: do not use compressed air for pumping over spills. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.
- Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

See Section 8. Exposure controls and personal protection. For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Avoid raising dust. Keep away from naked flames/heat. In finely divided state: use spark-/explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Powdered form: no compressed air for pumping over. Keep container tightly closed.
- Hygiene measures : Observe normal hygiene standards.

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

- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Ignition sources, Incompatible materials. Keep container closed when not in use. Store in a well-ventilated place. Keep cool.
- Incompatible products : Strong bases. Strong acids.
- Incompatible materials : Sources of ignition. Direct sunlight.
- Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
- Information on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) acids. water/moisture.
- Storage area : Store in a dry area. Meet the legal requirements.
- Special rules on packaging : SPECIAL REQUIREMENTS: closing. watertight. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1 National occupational exposure and biological limit values

Hydroquinone (123-31-9)	
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	2 mg/m <sup>3</sup> (inhalable fraction)
MAK (OEL STEL)	4 mg/m <sup>3</sup> (inhalable fraction)
OEL chemical category	Sensitizer, Group B Carcinogen
Belgium - Occupational Exposure Limits	
OEL TWA	1 mg/m <sup>3</sup>
Bulgaria - Occupational Exposure Limits	
OEL TWA	2 mg/m <sup>3</sup>

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<b>Hydroquinone (123-31-9)</b>	
<b>Croatia - Occupational Exposure Limits</b>	
GVI (OEL TWA) [1]	0.5 mg/m <sup>3</sup>
<b>Czech Republic - Occupational Exposure Limits</b>	
PEL (OEL TWA)	2 mg/m <sup>3</sup>
OEL chemical category	Potential for cutaneous absorption, Sensitizer
<b>Denmark - Occupational Exposure Limits</b>	
OEL C	2 mg/m <sup>3</sup>
<b>Estonia - Occupational Exposure Limits</b>	
OEL TWA	0.5 mg/m <sup>3</sup>
OEL STEL	1.5 mg/m <sup>3</sup>
OEL chemical category	Sensitizer
<b>Finland - Occupational Exposure Limits</b>	
HTP (OEL TWA) [1]	0.5 mg/m <sup>3</sup>
HTP (OEL STEL)	2 mg/m <sup>3</sup>
<b>France - Occupational Exposure Limits</b>	
VME (OEL TWA)	2 mg/m <sup>3</sup>
OEL chemical category	Carcinogen category 2, Mutagen category 2
<b>Greece - Occupational Exposure Limits</b>	
OEL TWA	2 mg/m <sup>3</sup>
OEL STEL	4 mg/m <sup>3</sup>
<b>Ireland - Occupational Exposure Limits</b>	
OEL TWA [1]	0.5 mg/m <sup>3</sup>
OEL STEL	1.5 mg/m <sup>3</sup> (calculated)
OEL chemical category	Sensitizer
<b>Lithuania - Occupational Exposure Limits</b>	
IPRV (OEL TWA)	0.5 mg/m <sup>3</sup>
TPRV (OEL STEL)	1.5 mg/m <sup>3</sup>
OEL chemical category	Sensitizer, Mutagen, Carcinogen
<b>Poland - Occupational Exposure Limits</b>	
NDS (OEL TWA)	1 mg/m <sup>3</sup>
NDSCh (OEL STEL)	2 mg/m <sup>3</sup>
<b>Portugal - Occupational Exposure Limits</b>	
OEL TWA	1 mg/m <sup>3</sup>
OEL chemical category	Sensitizer, A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
<b>Romania - Occupational Exposure Limits</b>	
OEL TWA	1 mg/m <sup>3</sup>
OEL STEL	2 mg/m <sup>3</sup>
OEL chemical category	C2

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<b>Hydroquinone (123-31-9)</b>	
<b>Slovakia - Occupational Exposure Limits</b>	
NPHV (OEL TWA) [1]	2 mg/m <sup>3</sup>
OEL chemical category	Potential for cutaneous absorption
<b>Spain - Occupational Exposure Limits</b>	
Local name	Hidroquinona
VLA-ED (OEL TWA) [1]	2 mg/m <sup>3</sup>
Remark	Sen (Sensibilizante. Véase Apartado 6).
OEL chemical category	Sensitizer
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2022. INSHT
<b>Sweden - Occupational Exposure Limits</b>	
NGV (OEL TWA)	0.5 mg/m <sup>3</sup>
KTV (OEL STEL)	1.5 mg/m <sup>3</sup>
OEL chemical category	Sensitizer
<b>United Kingdom - Occupational Exposure Limits</b>	
WEL TWA (OEL TWA) [1]	0.5 mg/m <sup>3</sup> 0.5 mg/m <sup>3</sup>
WEL STEL (OEL STEL)	1.5 mg/m <sup>3</sup> (calculated)
<b>Norway - Occupational Exposure Limits</b>	
Grenseverdi (OEL TWA) [1]	0.5 mg/m <sup>3</sup>
Korttidsverdi (OEL STEL)	1.5 mg/m <sup>3</sup> (value calculated)
OEL chemical category	Carcinogen, Allergenic substance
<b>Switzerland - Occupational Exposure Limits</b>	
MAK (OEL TWA) [1]	2 mg/m <sup>3</sup> (aerosol, inhalable dust, vapour)
KZGW (OEL STEL)	2 mg/m <sup>3</sup> (aerosol, inhalable dust, vapour)
OEL chemical category	Sensitizer, Skin notation, Category C2 carcinogen, Category 2 mutagen
<b>USA - ACGIH - Occupational Exposure Limits</b>	
Local name	Hydroquinone
ACGIH OEL TWA	1 mg/m <sup>3</sup>
Remark (ACGIH)	Eye irr; eye dam; DSEN; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans: The agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that may not be relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence does not suggest that the agent is likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure)
ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans, dermal sensitizer
Regulatory reference	ACGIH 2022

### 8.1.2. Recommended monitoring procedures

No additional information available

### 8.1.3. Air contaminants formed

No additional information available

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### 8.1.4. DNEL and PNEC

HYDROQUINONE BIS (2-HYDROXYETHYL) ETHER (104-38-1)	
<b>PNEC (Water)</b>	
PNEC aqua (freshwater)	0.1 mg/l
PNEC aqua (marine water)	0.01 mg/l
PNEC aqua (intermittent, freshwater)	1002 mg/l

### 8.1.5. Control banding

No additional information available

## 8.2. Exposure controls

### 8.2.1. Appropriate engineering controls

#### Appropriate engineering controls:

Ensure good ventilation of the work station.

### 8.2.2. Personal protection equipment

#### Personal protective equipment:

Avoid all unnecessary exposure.

#### Personal protective equipment symbol(s):



#### 8.2.2.1. Eye and face protection

##### Eye protection:

Safety glasses (EN 166). In case of dust production: protective goggles (EN 166)

#### 8.2.2.2. Skin protection

##### Skin and body protection:

Protective clothing (EN 14605 or EN 13034)

##### Hand protection:

Gloves

##### Other skin protection

##### Materials for protective clothing:

Good resistance: Butyl rubber. Polyvinylalcohol (PVA)

#### 8.2.2.3. Respiratory protection

##### Respiratory protection:

Dust production: dust mask with filter type P1

#### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

#### Environmental exposure controls:

Avoid release to the environment.

#### Other information:

Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

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

Physical state : Solid

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Colour	: White.
Appearance	: Solid. Powder.
Molecular mass	: 198.22 g/mol
Odour	: Almost odourless.
Odour threshold	: Not available
Melting point	: 99 °C (OECD 102: Melting Point/Melting Range)
Freezing point	: Not applicable
Boiling point	: 194 °C (10113.25 hPa)
Flammability	: Non flammable.
Explosive limits	: Not applicable
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Flash point	: 224 °C
Auto-ignition temperature	: 468 °C (T1)
Decomposition temperature	: Not available
pH	: 5 (13.1 g/l, 21 °C)
pH solution	: Not available
Viscosity, kinematic	: Not applicable (solid)
Viscosity, dynamic	: Not applicable
Solubility	: Moderately soluble in water. Water: 1.31 g/100ml (21 °C)
Partition coefficient n-octanol/water (Log Kow)	: Not available
Partition coefficient n-octanol/water (Log Pow)	: 0.41 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 30 °C)
Vapour pressure	: < 0.0045 hPa (45 °C)
Vapour pressure at 50°C	: Not available
Density	: 1150 kg/m <sup>3</sup>
Relative density	: 1.264 (20 °C, OECD 109: Density of Liquids and Solids)
Relative vapour density at 20°C	: Not applicable
Particle size	: 1.6 mm (Median particle size)
Particle size distribution	: Not available
Particle shape	: Not available
Particle aspect ratio	: Not available
Particle aggregation state	: Not available
Particle agglomeration state	: Not available
Particle specific surface area	: Not available
Particle dustiness	: Not available

## 9.2. Other information

### 9.2.1. Information with regard to physical hazard classes

No additional information available

### 9.2.2. Other safety characteristics

VOC content	: 0 %
Other properties	: Hygroscopic

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reacts violently with (strong) oxidizers and with (some) acids.

### 10.2. Chemical stability

Hygroscopic.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.



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### 10.5. Incompatible materials

Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

## SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not classified  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Not classified

#### HYDROQUINONE BIS (2-HYDROXYETHYL) ETHER (104-38-1)

LD50 oral rat > 5000 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral)

LD50 dermal rat > 2000 mg/kg bodyweight (Equivalent or similar to OECD 402, Rat, Male / female, Experimental value, Dermal)

#### HYDROQUINONE BIS (2-HYDROXYETHYL) ETHER (104-38-1)

LD50 oral rat > 5000 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral)

LD50 dermal rat > 2000 mg/kg bodyweight (Equivalent or similar to OECD 402, Rat, Male / female, Experimental value, Dermal)

LC50 Inhalation - Rat > 2000 mg/kg

#### Hydroquinone (123-31-9)

LD50 oral rat > 375 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))

LD50 dermal rabbit > 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rabbit, Male / female, Experimental value, Dermal, 14 day(s))

LC50 Inhalation - Rat ≥ 7.8 mg/l air (1 h, Rat, Female, Read-across, Inhalation (aerosol), 14 day(s))

Skin corrosion/irritation : Not classified  
pH: 5 (13.1 g/l, 21 °C)

Additional information : Based on available data, the classification criteria are not met

#### HYDROQUINONE BIS (2-HYDROXYETHYL) ETHER (104-38-1)

pH 5 (13.1 g/l, 21 °C)

#### Hydroquinone (123-31-9)

pH No data available in the literature

Serious eye damage/irritation : Not classified  
pH: 5 (13.1 g/l, 21 °C)

Additional information : Based on available data, the classification criteria are not met

#### HYDROQUINONE BIS (2-HYDROXYETHYL) ETHER (104-38-1)

pH 5 (13.1 g/l, 21 °C)

#### Hydroquinone (123-31-9)

pH No data available in the literature

Respiratory or skin sensitisation : Not classified

Additional information : Based on available data, the classification criteria are not met

Germ cell mutagenicity : Not classified

Additional information : Based on available data, the classification criteria are not met

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Carcinogenicity : Not classified  
Additional information : Based on available data, the classification criteria are not met

### Hydroquinone (123-31-9)

IARC group	3 - Not classifiable
Reproductive toxicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-single exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-repeated exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met

### HYDROQUINONE BIS (2-HYDROXYETHYL) ETHER (104-38-1)

NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
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### HYDROQUINONE BIS (2-HYDROXYETHYL) ETHER (104-38-1)

NOAEL (oral, rat, 90 days)	249 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
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Aspiration hazard : Not classified  
Additional information : Based on available data, the classification criteria are not met

### HYDROQUINONE BIS (2-HYDROXYETHYL) ETHER (104-38-1)

Viscosity, kinematic	Not applicable (solid)
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### HYDROQUINONE BIS (2-HYDROXYETHYL) ETHER (104-38-1)

Viscosity, kinematic	Not applicable (solid)
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### Hydroquinone (123-31-9)

Viscosity, kinematic	Not applicable (solid)
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## 11.2. Information on other hazards

### 11.2.1. Endocrine disrupting properties

### 11.2.2. Other information

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.  
Ecology - air : Not included in the list of substances which may contribute to the greenhouse effect (IPCC). Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).  
Ecology - water : Slightly harmful to crustacea. Not harmful to fishes. Mild water pollutant (surface water). Slightly harmful to algae.  
Hazardous to the aquatic environment, short-term (acute) : Not classified  
Hazardous to the aquatic environment, long-term (chronic) : Not classified

### HYDROQUINONE BIS (2-HYDROXYETHYL) ETHER (104-38-1)

LC50 - Fish [1]	> 1044 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	> 100.2 mg/l Test organisms (species): Daphnia magna

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<b>HYDROQUINONE BIS (2-HYDROXYETHYL) ETHER (104-38-1)</b>	
EC50 72h - Algae [1]	820 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	> 970 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
<b>HYDROQUINONE BIS (2-HYDROXYETHYL) ETHER (104-38-1)</b>	
LC50 - Fish [1]	> 1044 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 - Crustacea [1]	> 100.2 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	820 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	> 970 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
<b>Hydroquinone (123-31-9)</b>	
LC50 - Fish [1]	0.638 mg/l (Equivalent or similar to OECD 203, 96 h, Oncorhynchus mykiss, Flow-through system, Fresh water, Experimental value, Lethal)
LC50 - Other aquatic organisms [1]	0.05 mg/l Source: OECD SIDS
EC50 - Crustacea [1]	0.061 mg/l (Equivalent or similar to OECD 202, 48 h, Daphnia magna, Semi-static system, Fresh water, Experimental value, Locomotor effect)
EC50 - Crustacea [2]	0.061 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	0.335 mg/l (Species: Pseudokirchneriella subcapitata)
ErC50 algae	0.053 mg/l (Equivalent or similar to OECD 201, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)

### 12.2. Persistence and degradability

<b>HYDROQUINONE BIS (2-HYDROXYETHYL) ETHER (104-38-1)</b>	
Persistence and degradability	Not readily biodegradable in water.
<b>HYDROQUINONE BIS (2-HYDROXYETHYL) ETHER (104-38-1)</b>	
Persistence and degradability	Not readily biodegradable in water.
<b>Hydroquinone (123-31-9)</b>	
Persistence and degradability	Readily biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.48 – 1.1 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.83 g O <sub>2</sub> /g substance
ThOD	1.89 g O <sub>2</sub> /g substance

### 12.3. Bioaccumulative potential

<b>HYDROQUINONE BIS (2-HYDROXYETHYL) ETHER (104-38-1)</b>	
Partition coefficient n-octanol/water (Log Pow)	0.41 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 30 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
<b>HYDROQUINONE BIS (2-HYDROXYETHYL) ETHER (104-38-1)</b>	
Partition coefficient n-octanol/water (Log Pow)	0.41 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 30 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

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Hydroquinone (123-31-9)	
BCF - Fish [1]	3.162 l/kg (BCFBAF v3.00, Estimated value)
Partition coefficient n-octanol/water (Log Pow)	0.59 (Experimental value, 20 - 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

### 12.4. Mobility in soil

HYDROQUINONE BIS (2-HYDROXYETHYL) ETHER (104-38-1)	
Ecology - soil	No (test)data on mobility of the substance available.

HYDROQUINONE BIS (2-HYDROXYETHYL) ETHER (104-38-1)	
Ecology - soil	No (test)data on mobility of the substance available.

Hydroquinone (123-31-9)	
Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.97 – 1.585 (log Koc, Estimated value)
Ecology - soil	Highly mobile in soil.

### 12.5. Results of PBT and vPvB assessment

HYDROQUINONE BIS (2-HYDROXYETHYL) ETHER (104-38-1)	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	
Results of PBT assessment	The product does not meet the PBT and vPvB classification criteria

### 12.6. Endocrine disrupting properties

No additional information available

### 12.7. Other adverse effects

Additional information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Remove waste in accordance with local and/or national regulations. Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery. Dissolve or mix with a combustible solvent.
Additional information	: Can be considered as non hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.
Ecology - waste materials	: Avoid release to the environment.
European List of Waste (LoW) code	: 16 03 06 - organic wastes other than those mentioned in 16 03 05

## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

### 14.1. UN number or ID number

UN-No. (ADR)	: Not regulated
UN-No. (IMDG)	: Not regulated
UN-No. (IATA)	: Not regulated

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UN-No. (ADN) : Not regulated  
UN-No. (RID) : Not regulated

### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not regulated  
Proper Shipping Name (IMDG) : Not regulated  
Proper Shipping Name (IATA) : Not regulated  
Proper Shipping Name (ADN) : Not regulated  
Proper Shipping Name (RID) : Not regulated

### 14.3. Transport hazard class(es)

**ADR**  
Transport hazard class(es) (ADR) : Not regulated

**IMDG**  
Transport hazard class(es) (IMDG) : Not regulated

**IATA**  
Transport hazard class(es) (IATA) : Not regulated

**ADN**  
Transport hazard class(es) (ADN) : Not regulated

**RID**  
Transport hazard class(es) (RID) : Not regulated

### 14.4. Packing group

Packing group (ADR) : Not regulated  
Packing group (IMDG) : Not regulated  
Packing group (IATA) : Not regulated  
Packing group (ADN) : Not regulated  
Packing group (RID) : Not regulated

### 14.5. Environmental hazards

Dangerous for the environment : No  
Marine pollutant : No  
Other information : No supplementary information available

### 14.6. Special precautions for user

**Overland transport**  
Not regulated

**Transport by sea**  
Not regulated

**Air transport**  
Not regulated

**Inland waterway transport**  
Not regulated

**Rail transport**  
Not regulated

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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### SECTION 15: Regulatory information

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

##### 15.1.1. EU-Regulations

###### REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

###### REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

###### REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

###### PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

###### POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

###### Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

###### VOC Directive (2004/42)

VOC content : 0 %

###### Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

###### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

##### 15.1.2. National regulations

Listed on the United States TSCA (Toxic Substances Control Act) inventory

###### France

Occupational diseases	
Code	Description
RG 65	Eczematiform lesions of allergic mechanism
RG 66	Occupational rhinitis and asthma

###### Germany

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to VwVwS, Annex 1 or 2).  
Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)  
Technical Instructions on Air Quality Control (TA Luft) : 5.2.1 Total Dust, including Micro Dust.

###### Netherlands

ABM category : B(4) - low hazard for aquatic organisms  
SZW-lijst van kankerverwekkende stoffen : The substance is not listed  
SZW-lijst van mutagene stoffen : The substance is not listed  
SZW-lijst van reprotoxische stoffen – Borstvoeding : The substance is not listed  
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : The substance is not listed  
SZW-lijst van reprotoxische stoffen – Ontwikkeling : The substance is not listed

###### Switzerland

Storage class (LK) : NG - Non-hazardous

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### 15.2. Chemical safety assessment

A chemical safety assessment has been carried out

### SECTION 16: Other information

#### Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

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Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Carc. 2	Carcinogenicity, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
Muta. 2	Germ cell mutagenicity, Category 2
Skin Sens. 1	Skin sensitisation, Category 1

The classification complies with : ATP 12

Safety Data Sheet (SDS), EU

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