

**1 Identification**

- **Product identifier**
- **Trade name:** OptiPhase HiSafe 3
- **Article number:** 1200.437
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
 Revvity Health Sciences B.V.  
 Rigaweg 22  
 9723 TH Groningen  
 The Netherlands  
 Phone: 0031 50 5445900  
 www.revvity.com
- **Information department:**  
 Quality Assurance, Environment, Safety & Health (QA/ESH)  
 SDS.Groningen@revvity.com
- **Emergency telephone number:**  
 +31 50 5445971  
 CHEMTREC (within U.S.A. and Canada) 1-800-424-9300  
 CHEMTREC (from outside U.S.A. and Canada) +1703-527-3887

**2 Hazard(s) identification**

- **Classification of the substance or mixture**



GHS08 Health hazard

Aspiration Hazard 1 H304 May be fatal if swallowed and enters airways.



GHS05 Corrosion

Eye Damage 1 H318 Causes serious eye damage.



GHS09 Environment

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

Skin Irritation 2 H315 Causes skin irritation.

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

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**Hazard pictograms**



GHS05 GHS08 GHS09

**Signal word** *Danger*

**Hazard-determining components of labeling:**

Alkylphenol Polyglycoether  
Diisopropyl naphthalene isomers  
Alkoxy phosphate  
2,2'-iminodiethanol

**Hazard statements**

H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H304 May be fatal if swallowed and enters airways.  
H410 Very toxic to aquatic life with long lasting effects.

**Precautionary statements**

P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P310 If swallowed: Immediately call a poison center/doctor.  
P302+P352 If on skin: Wash with plenty of 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.  
P332+P313 If skin irritation occurs: Get medical advice/attention.  
P362 Take off contaminated clothing.

**Other hazards**

**Results of PBT and vPvB assessment**

**PBT:**

38640-62-9 Diisopropyl naphthalene isomers

**vPvB:**

38640-62-9 Diisopropyl naphthalene isomers

**3 Composition/information on ingredients**

**Chemical characterization: Mixtures**

**Description:** Mixture: consisting of the following components.

**Dangerous components:**

38640-62-9	Diisopropyl naphthalene isomers Aspiration Hazard 1, H304 Aquatic Chronic 1, H410 PBT; vPvB	40-60%
9016-45-9	Alkylphenol Polyglycoether Eye Damage 1, H318 Acute Toxicity - Oral 4, H302; Skin Irritation 2, H315	10-20%
112-34-5	2-(2-butoxyethoxy)ethanol Eye Irritation 2A, H319	10-20%

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9016-45-9	Alkylphenol Polyglycoether ⚠ Skin Irritation 2, H315; Eye Irritation 2A, H319	10-20%
39464-70-5	Alkoxy phosphate ⚠ Eye Damage 1, H318 ⚠ Skin Irritation 2, H315	2.5-10%
111-42-2	2,2'-iminodiethanol ⚠ Carcinogenicity 2, H351; Toxic to Reproduction 2, H361; Specific Target Organ Toxicity - Repeated Exposure 2, H373 ⚠ Eye Damage 1, H318 ⚠ Acute Toxicity - Oral 4, H302; Skin Irritation 2, H315 Aquatic Chronic 3, H412	0-2.5%

· **Non-Dangerous components**

92-71-7	2,5-Diphenyloxazole (PPO)	0-2.5%
7732-18-5	water, distilled, conductivity or of similar purity	0-2.5%
13280-61-0	1,4-Bis-(2-methylstyryl)-benzene (bis-MSB)	0-2.5%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

**4 First-aid measures**

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
Do not induce vomiting; immediately call for medical help.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

**5 Fire-fighting measures**

- **Extinguishing media**
- **Suitable extinguishing agents:**  
Foam  
Fire-extinguishing powder  
Carbon dioxide
- **Special hazards arising from the substance or mixture** Carbon monoxide (CO)
- **Advice for firefighters**
- **Protective equipment:** Wear fully protective suit.

\* **6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures**  
Ensure adequate ventilation  
Wear protective equipment. Keep unprotected persons away.

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- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

38640-62-9	Diisopropyl naphthalene isomers	5.6 mg/m <sup>3</sup>
112-34-5	2-(2-butoxyethoxy)ethanol	30 ppm
111-42-2	2,2'-iminodiethanol	3 mg/m <sup>3</sup>
92-71-7	2,5-Diphenyloxazole (PPO)	2.5 mg/m <sup>3</sup>
13280-61-0	1,4-Bis-(2-methylstyryl)-benzene (bis-MSB)	12 mg/m <sup>3</sup>

· **PAC-2:**

38640-62-9	Diisopropyl naphthalene isomers	61 mg/m <sup>3</sup>
112-34-5	2-(2-butoxyethoxy)ethanol	33 ppm
111-42-2	2,2'-iminodiethanol	28 mg/m <sup>3</sup>
92-71-7	2,5-Diphenyloxazole (PPO)	27 mg/m <sup>3</sup>
13280-61-0	1,4-Bis-(2-methylstyryl)-benzene (bis-MSB)	130 mg/m <sup>3</sup>

· **PAC-3:**

38640-62-9	Diisopropyl naphthalene isomers	370 mg/m <sup>3</sup>
112-34-5	2-(2-butoxyethoxy)ethanol	200 ppm
111-42-2	2,2'-iminodiethanol	130 mg/m <sup>3</sup>
92-71-7	2,5-Diphenyloxazole (PPO)	160 mg/m <sup>3</sup>
13280-61-0	1,4-Bis-(2-methylstyryl)-benzene (bis-MSB)	790 mg/m <sup>3</sup>

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.
- **Protection of hands:**



Protective gloves

EN ISO 374-1/Type B

- **Material of gloves**  
Nitrile rubber, NBR  
Recommended thickness of the material:  $\geq 0.2$  mm  
Breakthrough time:  $> 120$  minutes  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

- **Body protection:** Protective work clothing

**9 Physical and chemical properties**

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Fluid  
Color: Colorless  
Odor: Characteristic

· **pH-value at 20 °C (68 °F):** 5.8

· **Change in condition**

Boiling point/Boiling range: 290 °C (554 °F)

· **Flash point:** 152 °C (305.6 °F)

· **Auto igniting:** 500 °C (932 °F)

· **Ignition temperature:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

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· <b>Density at 20 °C (68 °F):</b>	0.99 g/cm <sup>3</sup> (8.26155 lbs/gal)
· <b>Solubility in / Miscibility with Water:</b>	Not miscible or difficult to mix.
· <b>Other information</b>	No further relevant information available.

**10 Stability and reactivity**

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** Carbon monoxide and carbon dioxide

**11 Toxicological information**

- **Information on toxicological effects**
- **Acute toxicity:**

· <b>LD/LC50 values that are relevant for classification:</b>		
<b>ATE (Acute Toxicity Estimate)</b>		
Oral	LD50	2,120 mg/kg
Dermal	LD50	37,050 mg/kg (rabbit)

<b>38640-62-9 Diisopropyl naphthalene isomers</b>		
Oral	LD50	4,000 mg/kg (Rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant

- **Carcinogenic categories**

· <b>IARC (International Agency for Research on Cancer)</b>		
111-42-2	2,2'-iminodiethanol	2B

· <b>NTP (National Toxicology Program)</b>		
None of the ingredients is listed.		

· <b>OSHA-Ca (Occupational Safety &amp; Health Administration)</b>		
None of the ingredients is listed.		

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**12 Ecological information**

· **Toxicity**

· **Aquatic toxicity:**

**9016-45-9 Alkylphenol Polyglycoether**

chronic NOEC/ECx >1 mg/l (Alge)

**9016-45-9 Alkylphenol Polyglycoether**

chronic NOEC/ECx >1 mg/l (Alge)

· **Persistence and degradability** No further relevant information available.

· **Behavior in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Results of PBT and vPvB assessment**

· **PBT:**

38640-62-9 Diisopropyl naphthalene isomers

· **vPvB:**

38640-62-9 Diisopropyl naphthalene isomers

· **Other adverse effects** No further relevant information available.

**13 Disposal considerations**

· **Waste treatment methods**

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

**14 Transport information**

· **UN-Number**

· **ADR, IMDG, IATA**

UN3082

· **UN proper shipping name**

· **ADR**

3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diisopropyl naphthalene isomers, Alkylphenol Polyglycoether)

· **IMDG**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diisopropyl naphthalene isomers, Alkylphenol Polyglycoether), MARINE POLLUTANT

· **IATA**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diisopropyl naphthalene isomers, Alkylphenol Polyglycoether)

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· **Transport hazard class(es)**

· **ADR**



· **Class**

9 (M6) Miscellaneous dangerous substances and articles

· **Label**

9

· **IMDG, IATA**



· **Class**

9 Miscellaneous dangerous substances and articles

· **Label**

9

· **Packing group**

· **ADR, IMDG, IATA**

III

· **Environmental hazards:**

Product contains environmentally hazardous substances:  
Diisopropyl naphthalene isomers, Alkylphenol  
Polyglycolether

· **Marine pollutant:**

Yes

Symbol (fish and tree)

· **Special marking (ADR):**

Symbol (fish and tree)

· **Special marking (IATA):**

Symbol (fish and tree)

· **Special precautions for user**

Warning: Miscellaneous dangerous substances and articles

· **Hazard identification number (Kemler code):**

90

· **EMS Number:**

F-A,S-F

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **Remarks:**

Special marking with the symbol (fish and tree).

· **UN "Model Regulation":**

UN3082, Environmentally hazardous substances, liquid,  
n.o.s. (Diisopropyl naphthalene isomers, Alkylphenol  
Polyglycolether), 9, III

**15 Regulatory information**

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

No further relevant information available.

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

112-34-5 | 2-(2-butoxyethoxy)ethanol

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111-42-2	2,2'-iminodiethanol	
<b>· TSCA (Toxic Substances Control Act):</b>		
38640-62-9	Diisopropyl naphthalene isomers	ACTIVE
112-34-5	2-(2-butoxyethoxy)ethanol	ACTIVE
39464-70-5	Alkoxy phosphate	ACTIVE
111-42-2	2,2'-iminodiethanol	ACTIVE
92-71-7	2,5-Diphenyloxazole (PPO)	ACTIVE
7732-18-5	water, distilled, conductivity or of similar purity	ACTIVE

<b>· Hazardous Air Pollutants</b>		
111-42-2	2,2'-iminodiethanol	

<b>· Proposition 65</b>		
<b>· Chemicals known to cause cancer:</b>		
111-42-2	2,2'-iminodiethanol	

<b>· Chemicals known to cause reproductive toxicity for females:</b>		
None of the ingredients is listed.		

<b>· Chemicals known to cause reproductive toxicity for males:</b>		
None of the ingredients is listed.		

<b>· Chemicals known to cause developmental toxicity:</b>		
None of the ingredients is listed.		

<b>· Carcinogenic categories</b>		
<b>· EPA (Environmental Protection Agency)</b>		
None of the ingredients is listed.		

<b>· TLV (Threshold Limit Value)</b>		
111-42-2	2,2'-iminodiethanol	A3

<b>· MAK (German Maximum Workplace Concentration)</b>		
111-42-2	2,2'-iminodiethanol	0.46 ppm; 2 mg/m <sup>3</sup>

<b>· NIOSH-Ca (National Institute for Occupational Safety and Health)</b>		
None of the ingredients is listed.		

**· GHS label elements**  
The product is classified and labeled according to the Globally Harmonized System (GHS).

**· Hazard pictograms**



GHS05



GHS08



GHS09

**· Signal word** Danger

**· Hazard-determining components of labeling:**  
Alkylphenol Polyglycoether  
Diisopropyl naphthalene isomers  
Alkoxy phosphate  
2,2'-iminodiethanol

**· Hazard statements**  
H315 Causes skin irritation.

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H318 Causes serious eye damage.

H304 May be fatal if swallowed and enters airways.

H410 Very toxic to aquatic life with long lasting effects.

· **Precautionary statements**

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P310 If swallowed: Immediately call a poison center/doctor.

P302+P352 If on skin: Wash with plenty of 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.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P362 Take off contaminated clothing.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H351 Suspected of causing cancer.

H361 Suspected of damaging fertility or the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.

H410 Very toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

· **Department issuing SDS:** Quality Assurance, Environment, Safety & Health (QA/ESH)

· **Contact:** SDS.Groningen@revvity.com

· **Date of preparation / last revision** 12/01/2023

· **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Toxicity - Oral 4: Acute toxicity – Category 4

Skin Irritation 2: Skin corrosion/irritation – Category 2

Eye Damage 1: Serious eye damage/eye irritation – Category 1

Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A

Carcinogenicity 2: Carcinogenicity – Category 2

Toxic to Reproduction 2: Reproductive toxicity – Category 2

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Printing date 12/01/2023

Reviewed on 12/01/2023

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*Specific Target Organ Toxicity - Repeated Exposure 2: Specific target organ toxicity (repeated exposure) – Category 2*

*Aspiration Hazard 1: Aspiration hazard – Category 1*

*Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1*

*Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3*

· **\* Data compared to the previous version altered.**