

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 23.11.2023

Version number 10 (replaces version 9)

Revision: 23.11.2023

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

- **1.1 Product identifier**
- **Trade name: Monophase S**
- **Article number: 6013109**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** *Laboratory chemicals*
- **1.3 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*
- **Further information obtainable from:**
*Quality Assurance, Environment, Safety & Health (QA/ESH)
 SDS.Groningen@revvity.com*
- **1.4 Emergency telephone number:**
*+31 50 5445971
 CHEMTREC: +1 703-527-3887*

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



corrosion

Eye Dam. 1 H318 Causes serious eye damage.



environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



Skin Irrit. 2 H315 Causes skin irritation.

STOT SE 3 H335 May cause respiratory irritation.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the GB CLP regulation.

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Hazard pictograms



GHS02 GHS05 GHS07 GHS09

Signal word Danger

Hazard-determining components of labelling:

Alkylphenol Polyglycoether
1,2,4-trimethylbenzene
Sodium dioctyl sulphosuccinate
Phosphoric acid, 2-ethylhexyl ester

Hazard statements

H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description: Mixture: consisting of the following components.

Dangerous components:

CAS: 95-63-6 EINECS: 202-436-9 Index number: 601-043-00-3	1,2,4-trimethylbenzene Flam. Liq. 3, H226 Aquatic Chronic 2, H411 Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	60-80%
CAS: 9016-45-9 NLP: 500-024-6	Alkylphenol Polyglycoether Eye Dam. 1, H318 Acute Tox. 4, H302; Skin Irrit. 2, H315	2.5-10%
CAS: 9016-45-9 NLP: 500-024-6	Alkylphenol Polyglycoether Skin Irrit. 2, H315; Eye Irrit. 2, H319	2.5-10%
CAS: 577-11-7 EINECS: 209-406-4	Sodium dioctyl sulphosuccinate Eye Dam. 1, H318 Skin Irrit. 2, H315	2.5-10%

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CAS: 78-40-0 EINECS: 201-114-5 Index number: 015-013-00-7	Triethyl phosphate ⚠ Acute Tox. 4, H302; Eye Irrit. 2, H319	2.5-10%
CAS: 12645-31-7 EINECS: 235-741-0	Phosphoric acid, 2-ethylhexyl ester ⚠ Skin Corr. 1B, H314	0-2.5%
CAS: 298-07-7 EINECS: 206-056-4	bis(2-ethylhexyl) hydrogen phosphate ⚠ Skin Corr. 1B, H314 ⚠ Acute Tox. 4, H302	0-2.5%
CAS: 111-42-2 EINECS: 203-868-0 Index number: 603-071-00-1	2,2'-iminodiethanol ⚠ Repr. 2, H361fd; STOT RE 2, H373 ⚠ Eye Dam. 1, H318 ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315 Aquatic Chronic 3, H412	0-2.5%

· Non-dangerous components

CAS: 7732-18-5 EINECS: 231-791-2	water, distilled, conductivity or of similar purity	0-2.5%
CAS: 92-71-7 EINECS: 202-181-3	2,5-Diphenyloxazole (PPO)	0-2.5%
CAS: 13280-61-0 EINECS: 236-285-5	1,4-Bis-(2-methylstyryl)-benzene (bis-MSB)	0-2.5%
	Polydimethylsiloxane (PDMS)	0-2.5%

· Additional information: For the wording of the listed hazard phrases refer to section 16.**SECTION 4: First aid measures****· 4.1 Description of first aid measures****· General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

· 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: If symptoms persist consult doctor.**· 4.2 Most important symptoms and effects, both acute and delayed Headache****· 4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

SECTION 5: Firefighting measures**· 5.1 Extinguishing media****· Suitable extinguishing agents:**

Foam

Fire-extinguishing powder

Carbon dioxide

· For safety reasons unsuitable extinguishing agents: Water with full jet

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- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
 Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
 Inform respective authorities in case of seepage into water course or sewage system.
 Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
 Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 Dispose contaminated material as waste according to section 13.
 Ensure adequate ventilation.
- **6.4 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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:**
 Keep ignition sources away - Do not smoke.
 Protect against electrostatic charges.
- **7.2 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:** Keep receptacle tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

95-63-6 1,2,4-trimethylbenzene

WEL	Long-term value: 125 mg/m ³ , 25 ppm
ILV	

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

- **Appropriate engineering controls** No further data; see section 7.
- **Individual protection measures, such as 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.

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· **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Hand protection**



Protective gloves

EN ISO 374-1/Type B

· **Material of gloves**

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 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/face protection**



Tightly sealed goggles

SECTION 9: Physical and chemical properties

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

· **General Information**

· Colour:	Colourless
· Odour:	Characteristic
· Melting point/freezing point:	-44 °C (-47.2 °F)
· Boiling point or initial boiling point and boiling range	170 °C (338 °F)
· Lower and upper explosion limit	
· Lower:	1.1 Vol % (95-63-6 1,2,4-trimethylbenzene)
· Upper:	7.0 Vol % (95-63-6 1,2,4-trimethylbenzene)
· Flash point:	48 °C (118.4 °F)
· Auto-ignition temperature:	520 °C (968 °F)
· Solubility	
· water:	Not miscible or difficult to mix.
· Density and/or relative density	
· Density at 20 °C (68 °F):	0.93 g/cm ³ (7.76085 lbs/gal)

· **9.2 Other information**

· Appearance:	
· Form:	Fluid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

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- **Information with regard to physical hazard classes**
- **Explosives** Void
- **Flammable gases** Void
- **Aerosols** Void
- **Oxidising gases** Void
- **Gases under pressure** Void
- **Flammable liquids** Flammable liquid and vapour.
- **Flammable solids** Void
- **Self-reactive substances and mixtures** Void
- **Pyrophoric liquids** Void
- **Pyrophoric solids** Void
- **Self-heating substances and mixtures** Void
- **Substances and mixtures, which emit flammable gases in contact with water** Void
- **Oxidising liquids** Void
- **Oxidising solids** Void
- **Organic peroxides** Void
- **Corrosive to metals** Void
- **Desensitised explosives** Void

SECTION 10: Stability and reactivity

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

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral	LD50	4,566 mg/kg
Inhalative	LC50/4 h	24.8 mg/l (Rat)

95-63-6 1,2,4-trimethylbenzene

Oral	LD50	3,400 mg/kg (Rat)
Dermal	LD50	3,160 mg/kg (Rabbit)
Inhalative	LC50/4 h	18 mg/l (Rat)

- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

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- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
 May cause respiratory irritation.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards**

· **Endocrine disrupting properties**

None of the ingredients is listed.

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**

95-63-6 1,2,4-trimethylbenzene

Inhalative	LC50	7.19-8.28 mg/l (Other fish)
	EC50/48h	6.14 mg/l (Daphnia magna)

9016-45-9 Alkylphenol Polyglycoether

	chronic NOEC/ECx	>1 mg/l (Alge)
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9016-45-9 Alkylphenol Polyglycoether

	chronic NOEC/ECx	>1 mg/l (Alge)
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- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**
 The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**

- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
 Do not allow product to reach ground water, water course or sewage system.
 Danger to drinking water if even small quantities leak into the ground.
 Also poisonous for fish and plankton in water bodies.
 Toxic for aquatic organisms.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**

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

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- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· 14.1 UN number or ID number · ADR, IMDG, IATA	1993
· 14.2 UN proper shipping name · IMDG, IATA	FLAMMABLE LIQUID, N.O.S. (1,2,4-trimethylbenzene)
· 14.3 Transport hazard class(es) · ADR	
· Class · Label	3 (F1) Flammable liquids. 3
· IMDG, IATA	
· Class · Label	3 Flammable liquids. 3
· 14.4 Packing group · ADR, IMDG, IATA	III
· 14.5 Environmental hazards: · Marine pollutant: · Special marking (ADR):	No Symbol (fish and tree)
· 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number:	Warning: Flammable liquids. 30 F-E, <u>S</u> -E
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· UN "Model Regulation":	UN1993, FLAMMABLE LIQUID, N.O.S., 3, III

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Poisons Act

· Regulated explosives precursors

None of the ingredients is listed.

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· **Regulated poisons**

None of the ingredients is listed.

· **Reportable explosives precursors**

None of the ingredients is listed.

· **Reportable poisons**

None of the ingredients is listed.

· **Directive 2012/18/EU**

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t

· **LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (UK ANNEX XIV)**

9016-45-9 Alkylphenol Polyglycoether

Sunset date: 2021-01-04

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

SECTION 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**

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.

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

H411 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

· **Abbreviations and acronyms:**

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

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

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

Flam. Liq. 3: Flammable liquids – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Repr. 2: Reproductive toxicity – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3
· * **Data compared to the previous version altered.**

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GB