

Safety Data Sheet
according to WHS Regulations

Printing date 23.11.2023

Version number 10

Revision: 23.11.2023

Hazardous according to criteria of Australian Safety and Compensation Council.

1 Identification

- **Product identifier**
- **Trade name:** Monophase S
- **Article number:** 6013109
- **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
- **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
Australian contact address:
Revvity
Level 2 ,Building C, Tenancy A,
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Mulgrave,
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- **Further information obtainable from:**
Quality Assurance, Environment, Safety & Health (QA/ESH)
SDS.Groningen@revvity.com
- **Emergency telephone number:**
+31 50 5445971
CHEMTREC (within Australia) +(61)-290372994
CHEMTREC (from outside Australia) +1 703-527-3887

2 Hazard(s) Identification

- **Classification of the substance or mixture**



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS09 environment

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

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GHS07

Skin Irrit. 2 H315 Causes skin irritation.

STOT SE 3 H335 May cause respiratory irritation.

· **Label elements**· **GHS label elements**

The product is classified and labelled according to the Globally Harmonised System (GHS).

· **Hazard pictograms**

GHS02

GHS05

GHS07

GHS09

· **Signal word** Danger· **Hazard-determining components of labelling:**

Alkylphenol Polyglycolether (2.5-10 %)
Sodium dioctyl sulphosuccinate (2.5-10 %)
Phosphoric acid, 2-ethylhexyl ester (0-2.5 %)
bis(2-ethylhexyl) hydrogen phosphate (0-2.5 %)

· **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/sparks/open flames/hot surfaces. 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): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position 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.

· **Other hazards**· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.
· **vPvB:** Not applicable.

* 3 Composition and Information on Ingredients

· **Chemical characterisation: Mixtures**· **Description:** Mixture: consisting of the following components.

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· Dangerous components:		
95-63-6	1,2,4-trimethylbenzene ⚠ Flam. Liq. 3, H226 ⚠ Aquatic Chronic 2, H411 ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Serious eye damage/irritation – Category 2A, H319; STOT SE 3, H335	60-80%
9016-45-9	Alkylphenol Polyglycoether ⚠ Eye Dam. 1, H318 ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315	2.5-10%
9016-45-9	Alkylphenol Polyglycoether ⚠ Skin Irrit. 2, H315; Serious eye damage/irritation – Category 2A, H319	2.5-10%
577-11-7	Sodium dioctyl sulphosuccinate ⚠ Eye Dam. 1, H318 ⚠ Skin Irrit. 2, H315	2.5-10%
78-40-0	Triethyl phosphate ⚠ Acute Tox. 4, H302; Serious eye damage/irritation – Category 2A, H319	2.5-10%
12645-31-7	Phosphoric acid, 2-ethylhexyl ester ⚠ Skin Corr. 1B, H314	0-2.5%
298-07-7	bis(2-ethylhexyl) hydrogen phosphate ⚠ Skin Corr. 1B, H314 ⚠ Acute Tox. 4, H302	0-2.5%
111-42-2	2,2'-iminodiethanol ⚠ Repr. 2, H361fd; STOT RE 2, H373 ⚠ Eye Dam. 1, H318 ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; STOT SE 3, H335 Aquatic Chronic 3, H412	0-2.5%

· Non-dangerous components		
7732-18-5	water, distilled, conductivity or of similar purity	0-2.5%
92-71-7	2,5-Diphenyloxazole (PPO)	0-2.5%
13280-61-0	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.

4 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.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** Headache

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- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire Fighting Measures

- **Suitable extinguishing agents:**
Foam
Fire-extinguishing powder
Carbon dioxide
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental Release Measures

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

7 Handling and Storage

- **Handling:**
- **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.
- **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.
- **Specific end use(s)** No further relevant information available.

*** 8 Exposure controls and personal protection**

- **Additional information about design of technical facilities:** No further data; see section 7.
- **Ingredients 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.
- **Additional information:** The lists valid during the making were used as basis.

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- **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.
- **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.
- **Protection of hands:**



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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

9 Physical and Chemical Properties

- **General Information**
- **Appearance:**
- **Form:** Fluid
- **Colour:** Colourless
- **Odour:** Characteristic
- **Change in condition**
- **Melting point/freezing point:** -44 °C
- **Initial boiling point and boiling range:** 170 °C
- **Flash point:** 48 °C
- **Auto-ignition temperature:** 520 °C
- **Ignition temperature:** Product is not selfigniting.
- **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
- **Explosion limits:**
- **Lower:** 1.1 Vol %
- **Upper:** 7.0 Vol %
- **Density at 20 °C:** 0.93 g/cm³

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- **Solubility in / Miscibility with water:** Not miscible or difficult to mix.
- **Other information** No further relevant information available.

10 Stability and Reactivity

- **Reactivity** No further relevant information available.
- **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** Based on available data, the classification criteria are not met.

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

ATE (Acute Toxicity Estimates)

Oral	LD50	4,491 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.
- **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.

12 Ecological Information

· **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)

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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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- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological 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.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
- **ADG, IMDG, IATA** 1993
- **UN proper shipping name**
- **IMDG, IATA** FLAMMABLE LIQUID, N.O.S. (1,2,4-trimethylbenzene)
- **Transport hazard class(es)**
- **ADG**
- 
- **Class** 3 (F1) Flammable liquids.

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· Label	3
· IMDG, IATA	
	
· Class	3 Flammable liquids.
· Label	3
· Packing group · ADG, IMDG, IATA	III
· Environmental hazards: · Marine pollutant: · Special marking (ADG):	No Symbol (fish and tree)
· Special precautions for user · Hazard identification number (Kemler code): · EMS Number:	Warning: Flammable liquids. 30 F-E,S-E
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· UN "Model Regulation":	UN1993, FLAMMABLE LIQUID, N.O.S. (not viscous) (1,2,4-trimethylbenzene), ENVIRONMENTALLY HAZARDOUS, 3, III

15 Regulatory information

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

· Australian Inventory of Industrial Chemicals		
95-63-6	1,2,4-trimethylbenzene	
577-11-7	Sodium dioctyl sulphosuccinate	
78-40-0	Triethyl phosphate	
12645-31-7	Phosphoric acid, 2-ethylhexyl ester	
298-07-7	bis(2-ethylhexyl) hydrogen phosphate	
111-42-2	2,2'-iminodiethanol	
7732-18-5	water, distilled, conductivity or of similar purity	
92-71-7	2,5-Diphenyloxazole (PPO)	
· Standard for the Uniform Scheduling of Medicines and Poisons		
78-40-0	Triethyl phosphate	S6
111-42-2	2,2'-iminodiethanol	S5, S6
· Australia: Priority Existing Chemicals		
None of the ingredients is listed.		

· **GHS label elements**

The product is classified and labelled according to the Globally Harmonised System (GHS).

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· Hazard pictograms



GHS02 GHS05 GHS07 GHS09

· Signal word *Danger*

· Hazard-determining components of labelling:

Alkylphenol Polyglycoether (2.5-10 %)
Sodium dioctyl sulphosuccinate (2.5-10 %)
Phosphoric acid, 2-ethylhexyl ester (0-2.5 %)
bis(2-ethylhexyl) hydrogen phosphate (0-2.5 %)

· 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/sparks/open flames/hot surfaces. 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): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position 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.

· 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
- 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

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.

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- **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
 - 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
 - Serious eye damage/irritation – Category 2A: Serious eye damage/eye irritation – Category 2A
 - Repr. 2: Reproductive toxicity – Category 2
 - STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 - 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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