

Safety Data Sheet
according to WHS Regulations

Printing date 29.11.2023

Version number 6

Revision: 29.11.2023

Hazardous according to criteria of Australian Safety and Compensation Council.

1 Identification

- **Product identifier**
- **Trade name:** Soluene-350
- **Article number:** 6003038
- **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,
211 Wellington Road,
Mulgrave,
VIC 3170
Australia
Phone: +613 9212 8500
- **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. 2 H225 Highly flammable liquid and vapour.



GHS08 health hazard

Repr. 1A H360 May damage fertility or the unborn child.
STOT SE 2 H371 May cause damage to the central nervous system and the visual organs.
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

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GHS05 corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS09 environment

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



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

STOT SE 3 H336 May cause drowsiness or dizziness.

· **Label elements**

· **GHS label elements**

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

· **Hazard pictograms**



GHS02



GHS05



GHS07



GHS08



GHS09

· **Signal word** Danger

· **Hazard-determining components of labelling:**

Toluene (40-60 %)

dodecyl(dimethyl)(tetradecyl)ammonium hydroxide (20-40 %)

methanol (2.5-10 %)

Methyltrioctylammonium chloride (Aliquat-336) (2.5-10 %)

· **Hazard statements**

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H360 May damage fertility or the unborn child.

H371 May cause damage to the central nervous system and the visual organs.

H336 May cause drowsiness or dizziness.

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

H410 Very toxic to aquatic life with long lasting effects.

· **Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

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

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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- **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.

· **Dangerous components:**

108-88-3	Toluene Flam. Liq. 2, H225 Repr. 1A, H360; STOT RE 2, H373; Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336	40-60%
94199-93-6	dodecyl(dimethyl)(tetradecyl)ammonium hydroxide Skin Corr. 1B, H314; Eye Dam. 1, H318 Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Acute Tox. 4, H302	20-40%
5137-55-3	Methyltrioctylammonium chloride (Aliquat-336) Skin Corr. 1B, H314; Eye Dam. 1, H318 Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Acute Tox. 4, H302	2.5-10%
67-56-1	methanol Flam. Liq. 2, H225 Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331 STOT SE 1, H370	2.5-10%

· **Non-dangerous components**

7732-18-5	water, distilled, conductivity or of similar purity	2.5-10%
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- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First Aid Measures

· **General information:**

Immediately remove any clothing soiled by the product.

Remove breathing equipment only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation:**

Supply fresh air or oxygen; call for doctor.

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. Then consult a doctor.

· **After swallowing:**

Do not induce vomiting; call for medical help immediately.

Drink plenty of water and provide fresh air. Call for a doctor immediately.

· **Information for doctor:**

- **Most important symptoms and effects, both acute and delayed** No further relevant information available.

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

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5 Fire Fighting Measures

- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **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:**
Prevent seepage into sewage system, workpits and cellars.
Dilute with plenty of water.
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).
Use neutralising agent.
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.
Open and handle receptacle with care.
- **Information about fire - and explosion protection:** Keep ignition sources away - Do not smoke.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **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.

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Ingredients with limit values that require monitoring at the workplace:

108-88-3 Toluene

NES	Short-term value: 574 mg/m ³ , 150 ppm
	Long-term value: 191 mg/m ³ , 50 ppm
	Sk

67-56-1 methanol

NES	Short-term value: 328 mg/m ³ , 250 ppm
	Long-term value: 262 mg/m ³ , 200 ppm
	Sk

- **Additional information:** The lists valid during the making were used as basis.
- **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.
Store protective clothing separately.
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 through 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

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- **Change in condition**
- **Initial boiling point and boiling range:** 110 °C
- **Flash point:** 6 °C
- **Auto-ignition temperature:** 550 °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:** 1.2 Vol %
- **Upper:** 8 Vol %
- **Vapour pressure at 20 °C:** 8 mmHg
- **Density at 20 °C:** 0.870 g/cm³
- **Solubility in / Miscibility with water:** Fully miscible.
- **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:**
Nitrogen oxides
Carbon monoxide

11 Toxicological Information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

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

ATE (Acute Toxicity Estimates)

Oral	LD50	829 mg/kg
Dermal	LD50	6,000 mg/kg
Inhalative	LC50/4 h	60 mg/l

108-88-3 Toluene

Oral	LD50	5,000 mg/kg (rat)
Dermal	LD50	12,124 mg/kg (rab)
Inhalative	LC50/4 h	5,320 mg/l (mouse)

- **Skin corrosion/irritation**
Causes severe skin burns and eye damage.
- **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**
May damage fertility or the unborn child.
- **STOT-single exposure**
May cause damage to the central nervous system and the visual organs.
May cause drowsiness or dizziness.
- **STOT-repeated exposure**
May cause damage to organs through prolonged or repeated exposure.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological Information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **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.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Must not reach sewage water or drainage ditch undiluted or unneutralised.
- **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 be specially treated adhering to official regulations.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

· UN-Number	
· ADG, IMDG, IATA	UN2924
· UN proper shipping name	
· ADG	2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S. (QUATERNARY AMMONIUM HYDROXIDE IN TOLUENE)
· IMDG	FLAMMABLE LIQUID, CORROSIVE, N.O.S. (QUATERNARY AMMONIUM HYDROXIDE IN TOLUENE)

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· IATA	FLAMMABLE LIQUID, CORROSIVE, N.O.S. (QUATERNARY AMMONIUM HYDROXIDE IN TOLUENE)
· Transport hazard class(es)	
· ADG	
	
· Class	3 (FC) Flammable liquids.
· Label	3+8
<hr/>	
· IMDG	
	
· Class	3 Flammable liquids.
· Label	3/8
<hr/>	
· IATA	
	
· Class	3 Flammable liquids.
· Label	3 (8)
· Packing group	
· ADG, IMDG, IATA	II
· Environmental hazards:	
· Marine pollutant:	No
· Special marking (ADG):	Symbol (fish and tree)
· Special precautions for user	Warning: Flammable liquids.
· Hazard identification number (Kemler code):	336
· EMS Number:	F-E,S-C
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
<hr/>	
· Transport/Additional information:	
· ADG	
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Tunnel restriction code	D/E
<hr/>	
· IMDG	
· Limited quantities (LQ)	1L

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· Excerpted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN2924, FLAMMABLE LIQUID, CORROSIVE, N.O.S. (METHANOL, Quaternary Ammonium Hydroxide), ENVIRONMENTALLY HAZARDOUS, 3 (8), II

15 Regulatory information

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

· **Australian Inventory of Industrial Chemicals**

108-88-3	Toluene
5137-55-3	Methyltrioctylammonium chloride (Aliquat-336)
7732-18-5	water, distilled, conductivity or of similar purity
67-56-1	methanol

· **Standard for the Uniform Scheduling of Medicines and Poisons**

108-88-3	Toluene	S6
67-56-1	methanol	S5, S6, S10

· **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).

· **Hazard pictograms**



GHS02 GHS05 GHS07 GHS08 GHS09

· **Signal word** Danger

· **Hazard-determining components of labelling:**

Toluene (40-60 %)
dodecyl(dimethyl)(tetradecyl)ammonium hydroxide (20-40 %)
methanol (2.5-10 %)
Methyltrioctylammonium chloride (Aliquat-336) (2.5-10 %)

· **Hazard statements**

H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H360 May damage fertility or the unborn child.
H371 May cause damage to the central nervous system and the visual organs.
H336 May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

· **Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

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P301+P312 *IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.*

P303+P361+P353 *IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.*

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 100 t**
- **Qualifying quantity (tonnes) for the application of upper-tier requirements 200 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**

H225 *Highly flammable liquid and vapour.*

H301 *Toxic if swallowed.*

H302 *Harmful if swallowed.*

H304 *May be fatal if swallowed and enters airways.*

H311 *Toxic in contact with skin.*

H314 *Causes severe skin burns and eye damage.*

H315 *Causes skin irritation.*

H318 *Causes serious eye damage.*

H331 *Toxic if inhaled.*

H336 *May cause drowsiness or dizziness.*

H360 *May damage fertility or the unborn child.*

H370 *Causes damage to organs.*

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

H400 *Very toxic to aquatic life.*

H410 *Very toxic 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:**

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

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

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. 2: Flammable liquids – Category 2

Acute Tox. 3: Acute toxicity – 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

Repr. 1A: Reproductive toxicity – Category 1A

STOT SE 1: Specific target organ toxicity (single exposure) – Category 1

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STOT SE 2: Specific target organ toxicity (single exposure) – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
· *** Data compared to the previous version altered.**

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