

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

Printing date 14.02.2023

Version number 4 (replaces version 3)

Revision: 14.02.2023

SECTION 1: Identification of the substance/mixture and of the company/undertaking**· 1.1 Product identifier****· Trade name:** SU-8 Developer**· Article number:** Y020100**· CAS Number:**

108-65-6

· EC number:

203-603-9

· Index number:

607-195-00-7

· Registration number 2-methoxy-1-methylethyl acetate (CAS 108-65-6): 01-2119475791-29-0050**· 1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

· Sector of Use SU16 Manufacture of computer, electronic and optical products, electrical equipment**· Product category** PC30 Photo-chemicals**· Application of the substance / the mixture** Photoresist remover**· 1.3 Details of the supplier of the safety data sheet****· Manufacturer/Supplier:**

Kayaku Advanced Materials, Inc.

200 Flanders Road

Westborough, MA 01581

Tel: (617) 965-5511

Fax: (617) 965-5818

The person responsible in EU Member State:

ONLY REPRESENTATIVE

Lionel Marcélis, PhD

President

REACH NATION SRL

22 Rue Notre Dame au Bois

1440 Braine-le-Château

BELGIUM

Tel : +32491880259

**Only Representative for 2-methoxy-1-methylethyl acetate (CAS 108-65-6) only. Other substances are being supported under REACH by Only Representatives of Non-European suppliers and others may be exempt from registration.*

· Further information obtainable from:

Product Safety

Email: productsafety@kayakuAM.com**· 1.4 Emergency telephone number:**

Kayaku Advanced Materials : 617-965-5511

Chemtrec USA Emergency : 800-424-9300 (24 hr)

Chemtrec International Emergency : 703-527-3887 (24 hr)

EU

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 14.02.2023

Version number 4 (replaces version 3)

Revision: 14.02.2023

Trade name: SU-8 Developer

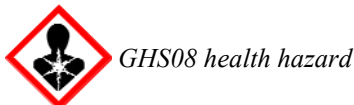
(Contd. of page 1)

SECTION 2: Hazards identification

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



Flam. Liq. 3 H226 Flammable liquid and vapour.



Repr. 1B H360D May damage the unborn child.



STOT SE 3 H336 May cause drowsiness or dizziness.

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



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

 1-Methoxy-2-propanol acetate
 2-Methoxy-1-propyl acetate

- Hazard statements
- H226 Flammable liquid and vapour.
- H360D May damage the unborn child.
- H336 May cause drowsiness or dizziness.

- Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

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

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P304+P341 IF INHALED: If breathing is difficult, 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.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 14.02.2023

Version number 4 (replaces version 3)

Revision: 14.02.2023

Trade name: SU-8 Developer

(Contd. of page 2)

- P370+P378 In case of fire: Use alcohol resistant foam to extinguish.
 P370+P378 In case of fire: Use fire-extinguishing powder to extinguish.
 P370+P378 In case of fire: Use carbon dioxide to extinguish.
 P403+P235 Store in a well-ventilated place. Keep cool.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Additional information:**

Restricted to professional users.

· **2.3 Other hazards**

None of the ingredients are included in the list established in accordance with Article 59(1) for having endocrine disrupting properties.

None of the ingredients are substances identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 (or Commission Regulation (EU) 2018/605).

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.1 Substances**

· **CAS No. Description**

108-65-6 1-Methoxy-2-propanol acetate

· **Identification number(s)**

· **EC number:** 203-603-9

· **Index number:** 607-195-00-7

· **Dangerous components:**

| | | |
|--|--|--------|
| CAS: 70657-70-4 EINECS: 274-724-2 Index number: 607-251-00-0 | 2-Methoxy-1-propyl acetate Flam. Liq. 3, H226; Repr. 1B, H360D; STOT SE 3, H335 | <0.5% |
| CAS: 108-65-6 EINECS: 203-603-9 Index number: 607-195-00-7 Reg.nr.: 01-2119475791-29-0050 | 1-Methoxy-2-propanol acetate Flam. Liq. 3, H226; STOT SE 3, H336 | >99.5% |

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **After inhalation:**

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

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:**

Wash eyes immediately with a large amount of water or normal saline, occasionally lifting upper and lower eye lids until no evidence of chemical remains (about 20 minutes). Remove contact lenses if present and easy to remove. Seek immediate medical attention.

· **After swallowing:** If symptoms persist consult doctor.

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

(Contd. on page 4)

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

Printing date 14.02.2023

Version number 4 (replaces version 3)

Revision: 14.02.2023

Trade name: SU-8 Developer

(Contd. of page 3)

4.3 Indication of any immediate medical attention and special treatment needed Treat symptomatically.**SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
 - Alcohol resistant foam
 - Fire-extinguishing powder
 - ABC powder
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained 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:**
 - Do not allow product to reach sewage system or any water course.
 - 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 item 13.
 - Ensure adequate ventilation.
 - Do not flush with water or aqueous cleansing agents
- **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/exhaust at the workplace.
 - Open and handle receptacle with care.
 - Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
 - Keep ignition sources away - Do not smoke.
 - Protect against electrostatic charges.
 - Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and containers:** No special requirements.
- **Information about storage in one common storage facility:**
 - Do not store together with alkalis (caustic solutions).
 - Do not store together with oxidising and acidic materials.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 14.02.2023

Version number 4 (replaces version 3)

Revision: 14.02.2023

Trade name: SU-8 Developer

(Contd. of page 4)

- **Further information about storage conditions:**
 Store in cool, dry conditions in well sealed containers.
 Store receptacle in a well ventilated area.
 Protect from heat and direct sunlight.
- **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:**

108-65-6 1-Methoxy-2-propanol acetate

| | |
|-------|---|
| IOELV | Short-term value: 550 mg/m ³ , 100 ppm |
| | Long-term value: 275 mg/m ³ , 50 ppm |
| | Skin |

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

· 8.2 Exposure controls

- **Appropriate engineering controls** No further data; see item 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**
 Keep away from food and beverages.
 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 low exposure use cartridge respirator. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Hand protection**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

- **Material of gloves** Nitrile rubber, NBR

- **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

EU

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 14.02.2023

Version number 4 (replaces version 3)

Revision: 14.02.2023

Trade name: SU-8 Developer

(Contd. of page 5)

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

| | |
|--|--------------------------|
| · Physical state | Liquid |
| · Colour: | Colourless |
| · Odour: | Characteristic |
| · Odour threshold: | Not determined. |
| · Melting point/freezing point: | < -67 °C |
| · Boiling point or initial boiling point and boiling range | 146 °C |
| · Flammability | Not applicable. |
| · Lower and upper explosion limit | |
| · Lower: | 1.5 Vol % |
| · Upper: | 10.8 Vol % |
| · Flash point: | 44 °C (クローズドカップ) |
| · Ignition temperature: | 315 °C |
| · Decomposition temperature: | Not determined. |
| · pH at 20 °C | 4 |
| · Viscosity: | |
| · Kinematic viscosity | Not determined. |
| · Dynamic: | Not determined. |
| · Solubility | |
| · water at 20 °C: | 220 g/l |
| · Partition coefficient n-octanol/water (log value) | Not determined. |
| · Vapour pressure at 20 °C: | 3.7 hPa |
| · Density and/or relative density | |
| · Density at 20 °C: | 0.9668 g/cm ³ |
| · Relative density | Not determined. |
| · Vapour density | Not determined. |

· 9.2 Other information

| | |
|---|---|
| · Appearance: | |
| · Form: | Liquid |
| · Important information on protection of health and environment, and on safety. | |
| · Auto-ignition temperature: | Not determined. |
| · Explosive properties: | Product is not explosive. However, formation of explosive air/vapour mixtures are possible. |
| · Organic solvents: | 99.5 % |
| · Solids content: | 0.5 % |
| · Change in condition | |
| · Evaporation rate | Not determined. |

· 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 |

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 14.02.2023

Version number 4 (replaces version 3)

Revision: 14.02.2023

Trade name: SU-8 Developer

(Contd. of page 6)

- | | |
|--|------|
| · 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** Stable
- **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**
Heat, flames and sparks. Extremes of temperature and direct sunlight.
Contact with incompatible materials.
- **10.5 Incompatible materials:** Strong Oxidizing Agents, Strong Acids, Strong Bases
- **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:**

108-65-6 1-Methoxy-2-propanol acetate

| | | |
|------------|----------|--------------------|
| Oral | LD50 | 8532 mg/kg (Rat) |
| Dermal | LD50 | > 5000 mg/kg (Rat) |
| Inhalative | LC50/6 h | 4345 ppm (Rat) |

- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **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**
May damage the unborn child.
- **STOT-single exposure**
May cause drowsiness or dizziness.
- **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.

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 14.02.2023

Version number 4 (replaces version 3)

Revision: 14.02.2023

Trade name: SU-8 Developer

(Contd. of page 7)

· 11.2 Information on other hazards

· Endocrine disrupting properties

None of the ingredients is listed.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

108-65-6 1-Methoxy-2-propanol acetate

| | |
|------|---|
| LC50 | 408-500 mg/l (daphnia magna) |
| | 100-180 mg/l (rainbow trout (<i>Oncorhynchus mykiss</i>)) |

· 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

 For information on endocrine disrupting properties see section 11.

· 12.7 Other adverse effects

· Additional ecological information:

· General notes:

Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

Disposal must be made in accordance with International, National, and regional regulations.

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.

SECTION 14: Transport information

· 14.1 UN number or ID number

· ADR, IMDG, IATA

 UN3272

· 14.2 UN proper shipping name

· ADR, IMDG, IATA

 ESTERS, N.O.S. (1-Methoxy-2-propanol acetate)

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 14.02.2023

Version number 4 (replaces version 3)

Revision: 14.02.2023

Trade name: SU-8 Developer

(Contd. of page 8)

· 14.3 Transport hazard class(es)

· ADR, IMDG, IATA



· Class

3 Flammable liquids.

· Label

3

· 14.4 Packing group

· ADR, IMDG, IATA

III

· 14.5 Environmental hazards:

· Marine pollutant:

No

· 14.6 Special precautions for user

Warning: Flammable liquids.

· Hazard identification number (Kemler code):

30

· EMS Number:

F-E,S-D

· 14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

· Transport/Additional information:

· ADR

· Limited quantities (LQ)

5L

· Transport category

3

· Tunnel restriction code

D/E

· UN "Model Regulation":

UN 3272 ESTERS, N.O.S. (1-METHOXY-2-PROPANOL ACETATE), 3, III

SECTION 15: Regulatory information

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

· Directive 2012/18/EU

· Named dangerous substances - ANNEX I Substance is not listed.

· Seveso category P5c FLAMMABLE LIQUIDS

· Qualifying quantity (tonnes) for the application of lower-tier requirements 5.000 t

· Qualifying quantity (tonnes) for the application of upper-tier requirements 50.000 t

· REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 30

· 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.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

(Contd. on page 10)

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

Printing date 14.02.2023

Version number 4 (replaces version 3)

Revision: 14.02.2023

Trade name: SU-8 Developer

(Contd. of page 9)

*H360D May damage the unborn child.***· Classification according to Regulation (EC) No 1272/2008***Art. 9(1) of Regulation (EC) No. 1272/2008 was used for classification purposes.***· Department issuing SDS: Product safety department****· Contact:** Tom Cole, EHS Manager (tcole@kayakuAM.com)**· Revision History:***The manufacturer's information in Section 1, the product hazard information in Section 2 and the component hazard information in Section 3 have been updated.***· Version number of previous version: 3****· 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**Repr. 1B: Reproductive toxicity – Category 1B**STOT SE 3: Specific target organ toxicity (single exposure) – Category 3*

EU