

Printing date 18.09.2019 Version number 2 Revision: 18.09.2019

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

· 1.1 Product identifier

· Trade name: <u>SU-8 Developer</u>

· 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
- · Application of the substance / the mixture Photoresist remover
- · 1.3 Details of the supplier of the safety data sheet
- · Manufacturer/Supplier: Kayaku Advanced Materials

200 Flanders Road Westborough, MA 01581 Tel: (617) 965-5511

Fax: (617) 965-5818

The person responsible in EU Member State:

ONLY REPRESENTATIVE

Andrée (Fanny) Kirsch - De Mesmaeker

President

REACH NATION SPRL

Avenue du Pesage, 18/9

B-1050 Brussels, Belgium

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*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)

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.



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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







GHS02 GHS07 GHS0

- · 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

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

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.

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.

P370+P378 In case of fire: Use for extinction: Alcohol resistant foam.
P370+P378 In case of fire: Use for extinction: Fire-extinguishing powder.

P370+P378 In case of fire: Use for extinction: Carbon dioxide.

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.

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- · 2.3 Other hazards
- · Results of PBT and vPvB assessment
- · **PBT**: Not applicable. · **vPvB**: Not applicable.

SECTION 3: Composition/information on ingredients

- · 3.1 Chemical characterisation: 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	1-Methoxy-2-propanol acetate (Registration No.: 01-2119475791-29-0050)	>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.
- · 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.



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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.

· 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.

 \cdot 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- · Additional information about design of technical facilities: No further data; see item 7.
- · 8.1 Control parameters

 Ingredients	with I	imit value	s that rea	uire moni	toring at 1	the workplace:

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

IOELV Short-term value: 550 mg/m³, 100 ppm Long-term value: 275 mg/m³, 50 ppm

Skin

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- · Additional information: The lists valid during the making were used as basis.
- · 8.2 Exposure controls
- · 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.

· Protection of hands:



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 protection:



Tightly sealed goggles

SECTION 9: Physical and chemical properties

- · 9.1 Information on basic physical and chemical properties
- · General Information
- · Appearance:

Form: Fluid
Colour: Colourless

Odour: Characteristic

Odour threshold: Not determined.

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· pH-value at 20 °C:

· Change in condition

Melting point/freezing point: < -67 °C Initial boiling point and boiling range: 146 °C

· Flash point: 44 °C

· Flammability (solid, gas): Not applicable.

• Ignition temperature: 315 °C

· Decomposition temperature: Not determined.

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Auto-ignition temperature:	Not determined.
Explosive properties:	Product is not explosive. However, formation of explosive air/vapou mixtures are possible.
Explosion limits:	
Lower:	1.5 Vol %
Upper:	10.8 Vol %
· Vapour pressure at 20 °C:	3.7 hPa
Density at 20 °C:	$0.9668 \ g/cm^3$
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
Solubility in / Miscibility with	
water at 20 °C:	220 g/l
Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Organic solvents:	99.5 %
Solids content:	0.5 %
· 9.2 Other information	No further relevant information available.

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 toxicological effects
- · Acute toxicity Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:					
108-65-6 1	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)			

- · Primary irritant effect:
- · Skin corrosion/irritation Based on available data, the classification criteria are not met.

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- · 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.
- · CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- · 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.

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 (Oncorhynchus mykiss))

- · 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.
- · 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.

- · 12.5 Results of PBT and vPvB assessment
- · **PBT**: Not applicable.
- · vPvB: Not applicable.
- · 12.6 Other adverse effects No further relevant information available.

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
- · ADR, IMDG, IATA UN3272
- · 14.2 UN proper shipping name
- · ADR, IMDG, IATA ESTERS, N.O.S. (1-Methoxy-2-propanol acetate)

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· 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.	
· Danger code (Kemler):	30	
· EMS Number:	F- E , S - D	
· 14.7 Transport in bulk according to Anne	x II of	
Marpol and the IBC Code	Not applicable.	
· Transport/Additional information:		
· <i>ADR</i>		
· Limited quantities (LQ)	5L	
· Transport category	3	
· Tunnel restriction code	D/E	

UN 3272 ESTERS, N.O.S. (1-METHOXY-2-PROPANOL

SECTION 15: Regulatory information

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Directive 2012/18/EU

· UN ''Model Regulation'':

- · 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.

ACETATE), 3, III

· Relevant phrases

H226 Flammable liquid and vapour.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

H360D May damage the unborn child.

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· 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)

· 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.

· Abbreviations and acronyms:

ADR: Accord européen sur le transport 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