Printing date 12/15/2014

Reviewed on 12/15/2014

1 Identification of the substance/mixture and of the company

- · Product identifier
- · Trade name: SU-8 Developer
- · CAS Number:

108-65-6

· EC number:

203-603-9

· Index number:

607-195-00-7

- · Application of the substance / the mixture Solvents
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

MicroChem Corp.

200 Flanders Road

Westborough, MA 01581 USA

· Information department:

Product Safety

Email: productsafety@microchem.com

· Emergency telephone number:

MicroChem Corp: 617-965-5511

Chemtrec USA Emergency: 800-424-9300

Chemtrec International Emergency: 703-527-3887

2 Hazard(s) identification

· Classification of the substance or mixture



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor.



GHS08 Health hazard

Repr. 1B H360 May damage fertility or the unborn child.

- · Label elements
- · GHS label elements

The substance is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms





GHS02

GHS08

- · Signal word Danger
- · Hazard-determining components of labeling:
- 2-Methoxy-1-propyl acetate
- · Hazard statements

H226 Flammable liquid and vapor.

H360 May damage fertility or the unborn child.

(Contd. on page 2)

(Contd. of page 1)



Safety Data Sheet acc. to OSHA HCS

Printing date 12/15/2014

P210

Reviewed on 12/15/2014

Trade name: SU-8 Developer

· Precautionary statements

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

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

P201 Obtain special instructions before use.

P308+P313 IF exposed or concerned: 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.

- · Classification system:
- · NFPA ratings (scale 0 4)



Health = 1Fire = 2

Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = 1

2 Fire = 2

REACTIVITY 0 Reactivity = 0

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

3 Composition/information on ingredients

- · Chemical characterization: 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:	
70657-70-4 2-Methoxy-1-propyl acetate	_ <0.5%
108-65-6 1-Methoxy-2-propanol acetate © Flam. Liq. 3, H226	> 99.5%

4 First-aid measures

- · Description of first aid measures
- · After inhalation:

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

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

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

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Trade name: SU-8 Developer

· After swallowing:

(Contd. of page 2)

Do not induce vomiting unless instructed to do so by a physician. Wash out mouth with water and keep person at rest. Seek immediate medical attention.

· Information for doctor:

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

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

5 Fire-fighting measures

· Extinguishing media

· Suitable extinguishing agents:

Fire-extinguishing powder Alcohol resistant foam

Carbon dioxide

· For safety reasons unsuitable extinguishing agents:

Water with full jet

Water

· Special hazards arising from the substance or mixture

Containers may explode due to pressure increase when container is exposed to extreme heat. Vapors may travel a considerable distance to a source of ignition and flash back along vapor trail.

· Advice for firefighters

· Protective equipment: Wear SCBA.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources

· Environmental precautions:

Do not allow product to reach sewage system or any drains.

Inform respective authorities in case of seepage into water course or sewage system.

· Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

Dispose contaminated material as waste according to Section 13.

· 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/exhaust at the workplace.

Store in cool, dry place in tightly closed containers.

Prevent formation of aerosols.

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(Contd. of page 3)



Safety Data Sheet acc. to OSHA HCS

Printing date 12/15/2014

Reviewed on 12/15/2014

Trade name: SU-8 Developer

· Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Use explosion-proof apparatus / fittings and spark-proof tools.

- · Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and containers:

Store in a cool location.

Store in inert atmosphere or keep well sealed to prevent the formation of peroxides and other oxidation products.

- · Information about storage in one common storage facility: Store away from oxidizing agents.
- · Further information about storage conditions:

Keep container well-sealed in cool, dry location.

Store under lock and key and with access restricted to technical experts or their assistants only.

· Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace:

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

WEEL 50 ppm

- · Additional information: The lists that were valid during the creation were used as basis.
- · 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.

Pregnant women should strictly avoid inhalation or skin contact.

· Respiratory equipment:

In case of low exposure, use cartridge respirator. In case of intensive or longer exposure, use SCBA.

· Protection of hands:

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



Protective gloves

- · Material of gloves Neoprene gloves
- · Penetration time of glove material Contact glove manufacture for break-through time.
- · Eye protection:



Tightly sealed goggles



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Trade name: SU-8 Developer

(Contd. of page 4)

9 Physical and chemical prope	utias
Information on basic physical and	chemical properties
· General Information	
· Appearance: Form:	7 1
Color:	Liquid Colorless
· Odor:	Coloriess Fruit-like
· Odour threshold:	Not determined.
· pH-value at 20 °C (68 °F):	4
· Change in condition	
Melting point/Melting range:	<-67 °C (<-89 °F)
Boiling point/Boiling range:	146 °C (295 °F)
· Flash point:	46 °C (115 °F)
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	315 °C (599 °F)
· Decomposition temperature:	Not determined.
· Auto igniting:	Not determined.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vape mixtures are possible.
· Explosion limits:	
Lower:	1.5 Vol %
Upper:	10.8 Vol %
· Vapor pressure at 20 °C (68 °F):	3.7 hPa (3 mm Hg)
· Density at 20 °C (68 °F):	0.96682 g/cm³ (8.068 lbs/gal)
Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	$1.6-2.3 \; (BuAc=1)$
· Solubility in / Miscibility with	
Water at 20 °C (68 °F):	220 g/l
· Partition coefficient (n-octanol/wate	er): Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Organic solvents:	100 %
VOC content:	100 %
· Other information	No further relevant information available.

10 Stability and reactivity

- · Reactivity
- · Chemical stability Stable under normal use conditions
- · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions Possible formation of peroxide.
- · Conditions to avoid Heat, flames and sparks. Extremes of temperature and direct sunlight.
- · Incompatible materials: Strong oxidizing agents

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· Hazardous decomposition products: Carbon monoxide and carbon dioxide Poisonous gases/vapors (Contd. of page 5)

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · LD/LC50 values that are 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)

- · Primary irritant effect:
- · on the skin: Irritant to skin and mucous membranes.
- on the eye: Irritating effect.
- · Sensitization: No sensitizing effects known.
- · Experience with humans: No further relevant information available.
- · Additional toxicological information:
- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer)

Substance is not listed.

· NTP (National Toxicology Program)

Substance is not listed.

12 Ecological information

- · 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))

- · Persistence and degradability No further relevant information available.
- · Behavior 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 (Self-assessment): slightly hazardous for water

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

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

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Trade name: SU-8 Developer

(Contd. of page 6)

13 Disposal considerations

- · Waste treatment methods
- · Recommendation:

Must not be disposed of as regular garbage/trash. Do not allow product to reach sewage system. Disposal must be made in accordance with Federal, State, and Local regulations.

- · Uncleaned packagings:
- · Recommendation: Disposal must be made in accordance with Federal, State, and Local regulations.

4 Transport information	
· UN-Number · DOT, ADR, IMDG, IATA	UN3272
· UN proper shipping name · DOT, IMDG, IATA · ADR	ESTERS, N.O.S. (1-Methoxy-2-propanol acetate) 3272 ESTERS, N.O.S. (1-Methoxy-2-propanol acetate)
· Transport hazard class(es) · DOT	
PLANATE LINES	
· Class · Label	3 Flammable liquids. 3
· ADR, IMDG, IATA	
Class Label	3 Flammable liquids 3
Packing group DOT, ADR, IMDG, IATA	III
Environmental hazards: Marine pollutant:	No
Special precautions for user Danger code (Kemler): EMS Number:	Warning: Flammable liquids 30 F-E,S-E
Transport in bulk according to Annex MARPOL73/78 and the IBC Code	II of Not applicable.
UN "Model Regulation":	UN3272, ESTERS, N.O.S. (1-Methoxy-2-propanol acetate), 3, III



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15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Sara
- · Section 355 (extremely hazardous substances):

Substance is not listed.

· Section 313 (Specific toxic chemical listings):

Substance is not listed.

- · TSCA (Toxic Substances Control Act): All ingredients are listed or comply with TSCA regulations.
- · Proposition 65
- · Chemicals known to cause cancer:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

· Chemicals known to cause developmental toxicity:

Substance is not listed.

- · Carcinogenic categories
- · EPA (Environmental Protection Agency)

Substance is not listed.

· TLV (Threshold Limit Value established by ACGIH)

Substance is not listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

Substance is not listed.

· OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

- · California SCAQMD Rule 443.1 VOC's: 960 g/l; vapor pressure 3.8 mm Hg @ 25C
- · GHS label elements

The substance is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms





GHS02 GHS08

- · Signal word Danger
- · Hazard-determining components of labeling:

2-Methoxy-1-propyl acetate

· Hazard statements

H226 Flammable liquid and vapor.

H360 May damage fertility or the unborn child.

· Precautionary statements

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

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

P201 Obtain special instructions before use.

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Reviewed on 12/15/2014

Trade name: SU-8 Developer

(Contd. of page 8)

P308+P313 IF exposed or concerned: 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.

· 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.

- · Department issuing MSDS: Product safety department
- · Contact: Mr. Cole
- · Revision History:

The business address of the manufacturer in Section 1 was updated. The hazard classification and precautionary statements for the mixture in Section 2 were revised. The toxicology data in Sections 11 and 12 were revised.

- · Date of preparation / last revision 12/15/2014 / -
- · 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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

USA