

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

Printing date 16.02.2023

Version number 6 (replaces version 5)

Revision: 16.02.2023

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier****Trade name:** SU-8 TF 6000 Series Resists**Article number:** Y143007, Y143010, Y143015, Y143027, Y143037, Y143051, Y143061**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**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)

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 16.02.2023

Version number 6 (replaces version 5)

Revision: 16.02.2023

Trade name: SU-8 TF 6000 Series Resists

(Contd. of page 1)



Skin Irrit. 2 H315 Causes skin irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H336 May cause drowsiness or dizziness.

· 2.2 Label elements

· Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

· Hazard pictograms



GHS02 GHS05 GHS07

· Signal word Danger

· Hazard-determining components of labelling:

Epoxy resin

gamma-Butyrolactone

1-Methoxy-2-propanol acetate

· Hazard statements

H226 Flammable liquid and vapour.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H317 May cause an allergic skin reaction.

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.

P370+P378 In case of fire: Use to extinguish: Alcohol resistant foam, Fire-extinguishing powder, 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.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 16.02.2023

Version number 6 (replaces version 5)

Revision: 16.02.2023

Trade name: SU-8 TF 6000 Series Resists

(Contd. of page 2)

· 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

· 3.2 Mixtures

· **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 120-92-3 EINECS: 204-435-9 Index number: 606-025-00-9 Reg.nr.: 01-2119495595-21-0000	Cyclopentanone ⚠ Flam. Liq. 3, H226; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319	20-50%
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	10-40%
	Epoxy resin ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	5-60%
CAS: 96-48-0 EINECS: 202-509-5	gamma-Butyrolactone ⚠ Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302; STOT SE 3, H336	1-10%
· Additional Components:		
Proprietary Photoacid Initiator ⚠ Aquatic Chronic 2, H411; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332		0.2-3%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· **General information:** Immediately remove any clothing soiled by the product.

· 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:** Do not induce vomiting; call for medical help immediately.

· **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 16.02.2023

Version number 6 (replaces version 5)

Revision: 16.02.2023

Trade name: SU-8 TF 6000 Series Resists

(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**Carbon dioxide***· For safety reasons unsuitable extinguishing agents:***Water with full jet**Water***· 5.2 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.***· 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.**Ensure adequate ventilation**Keep away from ignition sources.***· 6.2 Environmental precautions:***Do not allow to enter sewers/ surface or ground water.**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.***· 6.3 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***· 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.**Prevent formation of aerosols.**Keep receptacles tightly sealed.***· Information about fire - and explosion protection:***Keep ignition sources away - Do not smoke.**Protect against electrostatic charges.**Use explosion-proof apparatus / fittings and spark-proof tools.*

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 16.02.2023

Version number 6 (replaces version 5)

Revision: 16.02.2023

Trade name: SU-8 TF 6000 Series Resists

(Contd. of page 4)

- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and containers:** Store in a cool location.
- **Information about storage in one common storage facility:**
 - Do not store together with oxidising and acidic materials.
 - Do not store together with amines.
- **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.
 - 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.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 16.02.2023

Version number 6 (replaces version 5)

Revision: 16.02.2023

Trade name: SU-8 TF 6000 Series Resists

(Contd. of page 5)

· Eye/face protection



Tightly sealed goggles

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Physical state	Liquid
· Colour:	Clear to light yellow
· Odour:	Sweetish
· Odour threshold:	Not determined.
· Melting point/freezing point:	Undetermined.
· Boiling point or initial boiling point and boiling range	130 °C
· Flammability	Not applicable.
· Lower and upper explosion limit	
· Lower:	1.3 Vol %
· Upper:	10.8 Vol %
· Flash point:	30 °C
· Ignition temperature:	315 °C
· Decomposition temperature:	Not determined.
· pH	Not determined.
· Viscosity:	
· Kinematic viscosity	Not determined.
· Dynamic:	Not determined.
· Solubility	
· water:	Partly miscible.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure at 20 °C:	11 hPa
· Density and/or relative density	
· Density:	See Table 1 Other Information below
· Relative density	Not determined.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 16.02.2023

Version number 6 (replaces version 5)

Revision: 16.02.2023

Trade name: SU-8 TF 6000 Series Resists

(Contd. of page 6)

 · **Vapour density** Not determined.

 · **9.2 Other information**
Table 1. Product specific gravity and VOC data.

Name	Number	Sp. Grav.	Vol. (%by wt.)	VOC (g/L)
SU-8 TF 6000.1	Y143007	0.9800	80-85	830
SU-8 TF 6000.2	Y143010	0.9880	80-85	810
SU-8 TF 6000.5	Y143015	0.999	75-80	770
SU-8 TF 6001	Y143027	1.025	65-70	680
SU-8 TF 6002	Y143037	1.050	55-60	600
SU-8 TF 6005	Y143051	1.085	40-45	480
SU-8 TF 6010	Y143061	1.150	30-35	400

 · **Appearance:**

 · **Form:** Liquid

 · **Important information on protection of health and environment, and on safety.**

 · **Auto-ignition temperature:**
Product is not selfigniting.

 · **Explosive properties:**
Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

 · **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

 · **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

EU

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 16.02.2023

Version number 6 (replaces version 5)

Revision: 16.02.2023

Trade name: SU-8 TF 6000 Series Resists

(Contd. of page 7)

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** Exothermic polymerisation.
- **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 Bases, Strong Acids, Amines
- **10.6 Hazardous decomposition products:**
 Carbon monoxide and carbon dioxide
 Danger of forming toxic pyrolysis products.
 Corrosive gases/vapours

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.
- **Skin corrosion/irritation**
 Causes skin irritation.
- **Serious eye damage/irritation**
 Causes serious eye damage.
- **Respiratory or skin sensitisation**
 May cause an allergic skin reaction.
- **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 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.
- **11.2 Information on other hazards**

· Endocrine disrupting properties
--

None of the ingredients is listed.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **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.

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 16.02.2023

Version number 6 (replaces version 5)

Revision: 16.02.2023

Trade name: SU-8 TF 6000 Series Resists

(Contd. of page 8)

- 12.7 Other adverse effects
- Additional ecological information:
- General notes:

Water hazard class 1 (German Regulation) (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.

SECTION 13: Disposal considerations

- 13.1 Waste treatment methods

- **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

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

- 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

UN1866

- 14.2 UN proper shipping name

- ADR, IMDG, IATA

RESIN SOLUTION

- 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-E

- 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

(Contd. on page 10)

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

Printing date 16.02.2023

Version number 6 (replaces version 5)

Revision: 16.02.2023

Trade name: SU-8 TF 6000 Series Resists

(Contd. of page 9)

· UN "Model Regulation":

UN1866, RESIN SOLUTION, 3, III

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **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.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.
- **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:** 5
- **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)
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 Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3