according to Regulation (EC) No 1907/2006, Article 31

Printing date 03.04.2024

ADVANCED MATERIALS

Version number 10

Revision: 03.04.2024



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•	(Contd. of pa
Acute Tox. 4	H332 Harmful if inhaled.
Skin Irrit. 2	H315 Causes skin irritation.
Eye Irrit. 2	H319 Causes serious eye irritation.
Skin Sens. 1	H317 May cause an allergic skin reaction.
2.2 Label eleme	nts
	ding to Regulation (EC) No 1272/2008
	lassified and labelled according to the GB CLP regulation.
Hazard pictogra	IMS
GHS02 GHS	607 GHS09
Signal word Wa	rning
-	-
	ning components of labelling:
Epoxy resin	a a human
Epoxy novolac p	
Proprietary poly	giyciayi einer enyl[4-(phenylthio)phenyl]-, (OC-6-11)-hexafluoroantimonate(1-) (1:1)
	di-4,1-phenylene) bis[diphenyl-,(OC-6-11)-hexafluoroantimonate(1-)(1:1)
Hazard stateme	
	ns le liquid and vapour.
H332 Harmful i	
H315 Causes sk	
	<i>rious eye irritation.</i>
	e an allergic skin reaction.
	quatic life with long lasting effects.
Precautionary s	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
	smoking.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protectio
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 post
	comfortable for breathing.
P305+P351+P3	338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lense
	present and easy to do. Continue rinsing.
	<i>If skin irritation or rash occurs: Get medical advice/attention.</i>
P333+P313	<i>ון אווו וו וועווטו טר ועאו טכעו</i> א. <i>סכו וופעוכעו עעעוכב/עוובוווטו</i> .
P333+P313 P337+P313	
	If eye irritation persists: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention. In case of fire: Use to extinguish: Alcohol resistant foam, Fire-extinguishing powder, Car

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P501

(Contd. of page 2) Dispose of contents/container in accordance with local/regional/national/international regulations.

• Additional information:

13 % of the mixture consists of component(s) of unknown toxicity.

Contains 13 % of components with unknown hazards to the aquatic environment.

· 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 Chemical characterisation: Mixtures

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

Dangerous compone	ents:	
CAS: 120-92-3	Cyclopentanone	15-65%
EINECS: 204-435-9	🚸 Flam. Liq. 3, H226; 🚸 Skin Irrit. 2, H315; Eye Irrit. 2, H319	
	Epoxy resin	20-60%
	Cycloaliphatic Epoxy Resin	5-20%
	♦ Skin Irrit. 2, H315; Eye Irrit. 2, H319	
CAS: 108-32-7	Propylene carbonate	1-5%
EINECS: 203-572-1	𝔅 Skin Irrit. 2, H315; Eye Irrit. 2, H319	
	Proprietary polyglycidyl ether	1-5%
	𝔅 Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	
CAS: 71449-78-0	Sulfonium, diphenyl[4-(phenylthio)phenyl]-, (OC-6-11)-hexafluoroantimonate(1-)	0.5-2%
	(1:1)	
	🕸 Aquatic Acute 1, H400; Aquatic Chronic 1, H410; 🚸 Skin Sens. 1, H317	
CAS: 89452-37-9	Sulfonium, (thiodi-4,1-phenylene) bis[diphenyl-,(OC-6-11)-hexafluoroantimonate	0.5-2%
	(1-) (1:2)	
	🕸 Aquatic Acute 1, H400; Aquatic Chronic 1, H410; 🚯 Skin Sens. 1, H317	
	Epoxy Compound	0.5-2%
	📀 Eye Dam. 1, H318	

· 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:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Immediately remove any clothing soiled by the product.

• *After inhalation: Supply fresh air and to be sure call for a doctor.*

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• After skin contact:

If skin irritation continues, consult a doctor.

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.
- 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
- 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. Ensure adequate ventilation Keep away from ignition sources.
 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). 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 away from heat and direct sunlight.

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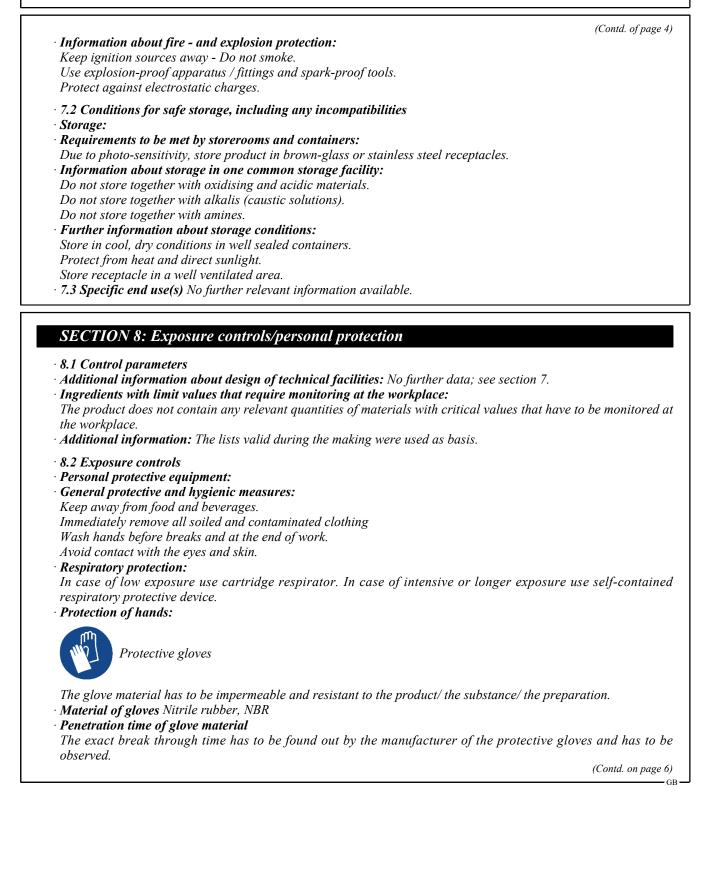
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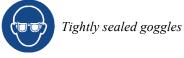
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• Eye protection:



· Body protection: Long-sleeved work clothes

9.1 Information on basic physical and c	hemical properties
General Information	
Appearance:	T · · · 1
Form:	Liquid
Colour: Odour:	Light yellow Mild
Odour: Odour threshold:	Mila Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range	: 130 °C
Flash point:	30 °C
Flammability (solid, gas):	Not applicable.
Auto-ignition temperature:	430 °C
Decomposition temperature:	Not determined.
Ignition temperature:	Product is not selfigniting.
Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapour pressure:	Not determined.
Density:	See Other information
Vapour density	Not determined.
Evaporation rate	1.6-2.3 (BuAc=1)
Solubility in / Miscibility with	
water:	Not miscible or difficult to mix.
Partition coefficient: n-octanol/water:	Not determined.

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· Viscosity: Dynamic:	Not determ	ined.				
• 9.2 Other information	Name	Number	Sp. Grav.	Vol.(%by wt.,) VOC(g/L)	
-	SU-8 3002	Y311035	1.032	65	675	
	SU-8 3005	Y311049	1.074	50	530	
	SU-8 3010	Y311060	1.105	39	425	
	SU-8 3025	Y311072	1.140	27	305	
	SU-8 3035	Y311074	1.146	25	285	
	SU-8 3050	Y311075	1.150	23	265	

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
- Carbon dioxide
- Danger of forming toxic pyrolysis products.
- Corrosive gases/vapours

SECTION 11: Toxicological information

- · 11.1 Information on toxicological effects
- · Acute toxicity
- Harmful if inhaled.

· LD/LC50 values relevant for classification: Enory resin

Epoxy rest	in	
Oral	LD50	>2000 mg/kg (Rat)
Dermal	LD50	>2000 mg/kg (rabbit)
Inhalative	LC50	>5 mg/L (Rat)
Epoxy Con	mpound	
Oral	LD50	8030 mg/kg (Rat)
Dermal	LD50	4248 mg/kg (Rat)
Inhalative	LC50/4 h	> 5.3 mg/l (Rat)
120-92-3 (Cyclopenta	none
Oral	LD50	1820 mg/kg (Rat)
Dermal	LD50	>2000 mg/kg (rabbit)
Inhalative	LC50/4 h	19.5 mg/l (Rat)
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Proprietary polyglycidyl ether

Oral LD50 >2000 mg/kg (Rat)

· Primary irritant effect:

· Skin corrosion/irritation

Causes skin irritation.

• *Serious eye damage/irritation Causes serious eye irritation.*

· Respiratory or skin sensitisation

May cause an allergic skin reaction.

• Additional toxicological information:

· 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* Based on available data, the classification criteria are not met.

• STOT-single exposure Based on available data, the classification criteria are not met.

• **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

100 <lc ec="" ic<="" th=""><th>$2.50 \leq 1000 \text{ mg/l (algae)}$</th></lc>	$2.50 \leq 1000 \text{ mg/l (algae)}$
	<1000 mg/l (fish)
	<1000 mg/l (invertebrates)
89452-37-9 Su	lfonium, (thiodi-4,1-phenylene) bis[diphenyl-,(OC-6-11)-hexafluoroantimonate (1-) (1:2)
LC50/24 h	4.4 mg/l (daphnia)
LC50/48 hr	0.68 mg/L (daphnia)
71449-78-0 Su	lfonium, diphenyl[4-(phenylthio)phenyl]-, (OC-6-11)-hexafluoroantimonate(1-) (1:1)
LC50/24 h	4.4 mg/l (daphnia)
LC50/48 hr	0.68 mg/L (daphnia)
Ероху Сотроі	und
EC50/48 h	30 mg/l (daphnia magna)
EC50/72 h	255 mg/l (Desmodesmus subscipatus (green algae))
LC50/96 h	55 mg/l (Cyprinus carpio (common carp))
120-92-3 Cycla	pentanone
EC50/48 h	3600 mg/l (Ceriodaphnia dubia (water flea))
	100 mg/l (daphnia magna)
EC50/72 h	>100 mg/l (scenedesmus subspicatus)
LC50/48 hr	2950 mg/L (golden orfe)
LC50/96 h	>100 mg/l (fish)

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- · Ecotoxical effects:
- Remark: Toxic for fish
- 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. Also poisonous for fish and plankton in water bodies.

- Toxic for aquatic organisms
- · 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

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.*

· 14.1 UN-Number · ADR, IMDG, IATA	UN1866
	01/1800
• 14.2 UN proper shipping name	
· ADR, IATA · IMDG	RESIN SOLUTION RESIN SOLUTION (Sulfanium dinhamul[4 (nhamulthi
· IMDO	RESIN SOLUTION (Sulfonium, diphenyl[4-(phenylthic phenyl]-, (OC-6-11)-hexafluoroantimonate(1-) (1:1) Sulfonium, (thiodi-4,1- phenylene) bis[diphenyl-,(OC-6-11) hexafluoroantimonate(1-) (1:2)), MARINE POLLUTANT
· 14.3 Transport hazard class(es)	
-	
-	
ADR, IMDG, IATA	3 Flammable liquids.
ADR, IMDG, IATA	3 Flammable liquids. 3
ADR, IMDG, IATA	-
ADR, IMDG, IATA	-
 ADR, IMDG, IATA Class Label 14.4 Packing group ADR, IMDG, IATA 14.5 Environmental hazards: 	3

Advanced materials

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14.6 Special precautions for user	Warning: Flammable liquids.
Hazard identification number (Kemler code):	30
EMS Number:	<i>F-E,<u>S-E</u></i>
Stowage Category	A
14.7 Transport in bulk according to Annex II of)f
Marpol and the IBC Code	Not applicable.
Transport/Additional information:	
ADR	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: El
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 1000 ml
Transport category	3
Tunnel restriction code	D/E
IMDG	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 1000 ml
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.

Poisons Act

· Regulated explosives precursors

None of the ingredients is listed.

Regulated poisons

None of the ingredients is listed.

· Reportable explosives precursors

None of the ingredients is listed.

Reportable poisons

None of the ingredients is listed.

• 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.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

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H318 Causes serious eye damage.	
H319 Causes serious eye irritation.	
H400 Very toxic to aquatic life.	
H410 Very toxic to aquatic life with long lasting effects.	
Department issuing SDS: Product safety department	
Contact: Tom Cole, EHS Manager (tcole@kayakuam.com)	
Abbreviations and acronyms:	
RID: Règlement international concernant le transport des marchandises dangereuses par cl	hamin de fou (Pequilations Concerning
International Transport of Dangerous Goods by Rail)	iemin de jer (Regulations Concerning
ICAO: International Civil Aviation Organisation	
ADR: Accord relatif au transport international des marchandises dangereuses par route (Europe	an Agreement Concerning the Internatio
Carriage of Dangerous Goods by Road)	an fighteement concerning the finer hand
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	
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 Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1	
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic nazara – Category 1 Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1	1
Aquatic Chronic 1. Hazardous to the aquatic environment - long-term aquatic hazard – Category 1 Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2	
require on one 2. Huzardous to the aquatic environment tong term aquatic hazard = category 2	

