MATERIAL SAFETY DATA SHEET
KEYSORB 8030

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product name : 1 , 3 - B i s [(2 - c yano-3,3-diphenylacryloyl)oxy]-2,2-bis[[(2-cyano-3,3-diphenylacr yloyl)oxy]methy l] propane Pent aery thrito l t etr akis(2-cyano-3,3-di phenylacry lat e)

CAS number : 178671-58-4

Company name : UV Chem-Keys Co., Ltd
RM2607 Building No.1 Guosheng, Lane 388, Zhongjiang Road, Putuo District, Shanghai 200062 China
Zip Code: 200122
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2. Health Hazards Data

2.1Classification of the substance or mixture

2.1.1Classification according to 67/548/EEC and Regulation (EC) No 1272/2008

Regulation (EC) No 1272/2008	
Hazard classes and hazard categories	Hazard Statement
N/A	N/A

67/548/EEC	
Hazards characteristics	R Phrases
N/A	N/A

2.1.2 The most important adverse effects

2.1.2.1 The most important adverse physicochemical effects:

Not applicable.

2.1.2.2 The most important adverse human health effects:

Not applicable..

2.1.2.3 The most important adverse environmental effects:

Not applicable.

2.2 label elements

Hazard Pictograms: No Hazard Pictogram is used.

Signal Word(S): No signal word is used

Hazard Statement: Not applicable

Precautionary Statement: Not applicable

3. COMPOSITION / INFORMATION ON INGREDIENTS

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4. FIRST AID MEASURES (ACTION)

Eye contact	:	Rinse immediately with plenty of water for at least 15 minutes. In case of eye irritation, seek medical attention
Skin contact	:	Wash off with soap and plenty of water. Do not use organic solvents. In case of dematitis, seek medical attention.
Ingestion	:	Immediately give plenty (>500 ml) of water (if possible charcol slurry). In case of spontaneous vomiting be sure that vomitus can freely drain due of danger of suffocation. Give water repeatedly. Artificial induction of vomiting should be restricted to first aid staff. Give nothing by mouth in case of unconsciousness or convulsion. Seek medical advice
Inhalation	:	Rinse immediately with plenty of water for at least 15 minutes. In case of eye irritation, seek medical attention

Suitable Extinguishing Media	:	Water spray. Carbon dioxide, dry chemical powder or appropriate foam.
Extinguishing Media Which Must Not Be Used For Safety Reasons		High volume water jet
Explosion Haza		Contaminated water from fire hoses or sprinklers, etc., must be prevented from draining into watercourses, sewers, or the ground water. Sufficient measures must be taken to retain water used for extinguishing. Contaminated water and soil must be disposed of in conformity with local regulations
Special Protective Equipment For Firefighters		Wear full protective clothing. Wear self-contained breathing apparatus
Hazardous		Oxides of carbon, oxides of nitrogen (NOX), toxic

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Decomposition Products		gases/vapours

5. ACCIDENTAL RELEASE MEASURES

Personal Precautions	:	Do not breathe vapors/dust. Remove all sources of ignition. Avoid contact with skin, eyes and clothing
Environmental Precautions	:	Do not flush into surface water, sanitary sewer or ground water system
Methods for Cleaning Up	:	Use mechanical handling equipment. Collect the spilled product into suitable containers, which must be tightly sealed and properly labelled. Avoid dust formation

6. FIRE-FIGHTING MEASURES

Extinguishing media	:	Water spray, Carbon dioxide (CO2), Foam, Dry powder
Extinguishing media which must not be used for safety reasons	:	High volume water jet
Exposure hazards	:	Contaminated water from fire hoses or sprinklers, etc., must be prevented from draining into watercourses, sewers, or the ground water. Sufficient measures must be taken to retain water used for extinguishing. Contaminated water and soil must be disposed of in conformity with local regulations.
Special protective equipment for firefighters	:	Wear full protective clothing. Wear self-contained breathing apparatus.
Hazardous decomposition products	:	Oxides of carbon, Oxides of nitrogen (NOx), Hydrogen chloride, Toxic gases/vapours

7. HANDLING AND STORAGE

Handling	:	Handle and open container with care. Avoid dust formation and ignition sources. Ensure good local exhaust ventilation. Do not eat, drink or smoke at the workplace

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Storage : Storage will be in appropriate ar eas with adequate spill containment and in accordance with state legislation.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

It is ant icipated t hat waterside, transport and warehouse workers would only be exposed t o the notified chemical in the event of an accidental spill. Should a spill occur, it is expected to be contained and collected using dust binding materials, and placed into suitable containers for recovery or disposal in accord with the MSDS and official regulations.

In t h e mixing, extrusion and moulding plants, t h e potential rout es of worker exposure to the notified chemical will be dermal contact and inhalation . Spillages and dust generation during weighing , transferring, mixing, moulding, maintenance, and cleaning operations may also result i n exposure to the eyes, skin,nose, throat and mucous membranes. Results of a particle size distribution study for Keysorb 8030 (t est report not provided) indicates that although the majority of dust particles are in the inhalable range (10-100 μm) , al most none are in the respirable range (<10 μm) . High dust concentrations with in the plastics processing plant have a potential for com bust ion or explosion. The notifier indicates that adequate ventilation will be in place to prevent workers from breathing dust and particulates. Local exhaust ventilation will b e em ployed at all work areas when required.

During extrusion, at the formulation plant and during downstream use, the polymer compounds are heat ed at high temperatures for an ext ended peri od, and harmful fum es and vapours can evolve. It is expected that these fum es will be captured and scrubbed. Cross contamination will be avoided by thorough cleaning of t he extruder and other processing equipment with purging compound prior to product changeover. Any incidents of accidental spillages will be contained and removed by mechanical means such as vacuuming or sweeping . It is intend ed that dust formation will be avoided and the release will be kept out of water supplies and sewers.

Plastics production plant operators will wear appropriate respirators, dust masks and safety glasses with side-shields/chemical goggles . Protective clothing and gloves will also be worn at all times.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	White crystalline powder with no odour
Density	:	1198 kg/ m^3at 20℃
Melting Point	:	170-178℃
Vapour Pressure	:	$<10^{-9}$kPa at 20℃
Water So lubility	:	$<1x10^{-4}$g/L at 20℃
Hydrolysis as a Functi on of pH	:	Not determined
Partition Coefficient	:	log Pow = 8.0

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(n-octanol/water)		log Pow = 13.4 (estimated)

10. STABILITY AND REACTIVITY

Dissociation Constant	:	Not determined
Flammability Limits	:	Not considered highly flammable
Auto ignition Temperature	:	No self ignition to 400℃
Explosive Properties	:	Not considered explosive
Reactivity	:	Stable under normal environmental conditions

11. TOXICOLOGICAL INFORMATION

Rat, acuteoral LD50 >2000 mg /kg bw	:	low toxicity
Rat, acutedermal LD50 >2000 mg /kg bw	:	low toxicity
Rat, acute inhalation	:	Not sensitising
Rabbit, skin irritation	:	Slightly irritating
Rabbit, eye irritation		slightly irritating
Guin ea pig,skin sensitisation - adjuvanttest		No evidence o f sensitisation (10 % notified chemical)
Rat,repeat dose oral toxicity - 28 day s		NOAEL = 15000 ppm
Genotoxicity-bacterial reverse mutation		Non mutagenic
Genotoxicity – invitro chromosomal aberration test		Non genotoxic
Genotoxicity – i nvivogene mutationtest		non genotoxic
Pharm acokinetic/Toxicoki neticstudies		no data available
Developmental and reproductive effect s		no data available
Carcinogenicity		no data available

12. ECOLOGICAL INFORMATION

Acute toxicity to fish – Zebra fish

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LC50 >10000 mg /L at 96 hours.(based on nominal concentrations)
LC50>245 mg /L at 96 hours.(based on measured concentrations)
NOEC>10000 m g /L at 96 hours. (based on nominal concentrations)
NOEC>245 m g /L at 96 hours. (based on measured concentrations)
No mortalities or substance related sublethal effects were observed at any o f the test concentrations.
The test sub stance is not toxic to fish up to the limit of its water solubility.
Acute toxicity to fish - Common carp
LC50>1000 m g /L at 96 hours. (based on nominal)
NOEC > 100 m g /L at 96 hours.

No mortalities were observed at an y test concentrations. The only sublethal symptom recorded was swimming near water surface at the 1000 mg /L concent r at ion (3 or 4 fish were observed at 1, 4, 24, 48, 72 and 96 hours aft er start of exposure).

The test substance is no t toxic to fish up to the limit of its water solubility.

Acute toxicity to aquatic invertebrates

LC50 >100 mg /L at 48 hours
NOEC (or LOEC) > 100 mg /L at 48 hours (the highest concent rationtested)

No immobilised daphnia were observed. The analytical recovery rates in all analysed test solutions were below the detection limit. Test substance precipitation or physical effect s were not report ed.

The test substance is not toxic to Daphniamagna up to the limit o f its water solubility.

Algal growth inhibition test

Method : EC Direct iv e 92/ 69/EEC C . 3 Al gal Inhibition Test .

The analytical recovery rates (after 0 and 72 hours) in all analysed test solutions were below the detection limit of 0.1 mg /L.

The test substance is no t toxic to algae up to the limit of its water solubility.

13. DISPOSAL CONSIDERATIONS

Uncontaminated packaging may be reused.

The notified chemical wast e and cont amin at ed packaging should be disposed of to an approved waste disposal facility in accordance with official regulations. Treatment option s include incineration o r secured land fill disposal.

Spills/release of the notified chemical should be prevented from entering drains, surface and ground water, or contaminating firefighting water.

Small spills should be picked up with suitable appliances while large spills contained with dust binding material prior to disposal in accordance with official regulations.

14. Transport information

	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN-Number:	Not regulated	Not regulated	Not regulated
UN Proper	Not regulated	Not regulated	Not regulated

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shipping name:			
Transport hazard Class:	Not regulated	Not regulated	Not regulated
Packaging group:	Not regulated	Not regulated	Not regulated
Environmental hazards:	No	No	No
Specialprecautions for user:	See section 3.2	See section 3.2	See section 3.2
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not regulated	Not regulated	Not regulated

15. REGULATORY INFORMATION

RCRA status: Not a hazardous waste under RCRA (40 CFR 261).
CERCLA status: Not listed.

16. Other information

Legal disclaimer : The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

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