RTC®-16 SAFETY DATA SHEET

Product Name: RTC®-16

Compiled according to GB/T16483-2008 and GB/T17519-2013

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SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: RTC®-16

Chemical Name: 2,2,4-Trimethyl-1,3-Pentanediol Diisobutyrate

Company: Runtai Chemical (Taixing) Co.,Ltd

Address: No.17 West Wenhua Road, Taixing Economic Development Zone, Jiangsu Province, China

Postal Code: 225400

Phone: 400-626-0050

FAX: 0523-80575519

URL: www.runtaichem.com

Recommended use of the chemical and restrictions on use

Recommended use: Coalescing agent for emulsions

Restrictions on use: None known.

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Chronic aquatic toxicity, Category 3

GHS label elements

Hazard pictograms: NO

Signal word: Warning

Hazard statements:

H412: Harmful to aquatic life with long lasting effects.

Precautionary statements:

P273 Avoid release to the environment.

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

Response:

P308 + P313 IF exposed or concerned: Get medical advice/attention.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

Hazardous components which must be listed on the label: 2,2,4-trimethyl-1,3-pentanediol diisobutyrate

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture: Substance

Chemical name	CAS NO.	Mol. wt.	Concentration(w/w)
2,2,4-trimethyl-1,3-pentanediol diisobutyrate	6846-50-0	286.4	≥99.0%

SECTION 4. FIRST AID MEASURES

In case of skin contact: Take off all contaminated clothing immediately. Wash off immediately with plenty of water for at least 15 minutes.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If inhaled: Move to fresh air.Call a physician or poison control centre immediately.

If swallowed: If accidentally swallowed obtain immediate medical attention.

Most important symptoms and effects, both acute and delayed: None known.

Notes to physician: Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media: Carbon dioxide (CO_2), Dry chemical, Water spray

Unsuitable extinguishing media: Do not use a solid water stream as it may scatter and spread fire.

Specific hazards during fire fighting: None known.

Hazardous combustion products: No hazardous combustion products are known.

Specific extinguishing methods: None known.

Special protective equipment for firefighters: Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment.Local authorities should be advised if significant spillages cannot be contained.

Environmental precautions: Avoid release to the environment.

Methods and materials for containment and cleaning up: Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local /national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion: None known.

Advice on safe handling: Do not breathe vapours or spray mist.

Do not get on skin or clothing.

Do not swallow.

Use only with adequate ventilation.

Wash thoroughly after handling.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage: Keep tightly closed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
2,2,4-trimethyl-1,3-pentanediol diisobutyrate	Workers	Skin contact	Long-term exposure, Systemic effects	31.2 mg/kg bw/day
	Workers	Inhalation	Long-term exposure, Systemic effects	110 mg/m3
	General Population	Skin contact	Long-term exposure, Systemic effects	18.8 mg/kg bw/day
	General Population	Inhalation	Long-term exposure, Systemic effects	32.6 mg/m3
	General Population	Oral	Long-term exposure, Systemic effects	18.8 mg/kg bw/da

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
2,2,4-trimethyl-1,3-pentanediol diisobutyrate	Water	0.014 mg/l
	Marine water	0.0014 mg/l
	Aqua Intermittent	0.14 mg/l
	Fresh water sediment	1.15 mg/kg
Remarks:	wet weight	
	Marine sediment	0.115 mg/kg
	Soil	0.926 mg/kg
	Sewage treatment plant	3 mg/l

Engineering measures: should be sufficient to control airborne levels.

Ensure adequate ventilation.

Personal protective equipment

Respiratory protection: Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Hand protection

Remarks: Wear suitable gloves.

Eye protection: Safety glasses.

Protective measures: Remove respiratory and skin/eye protection only after va pours have been cleared from the area.

Ensure that eye flushing systems and safety showers are located close to the working place.

Use personal protective equipment as required.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Colour: colourless liquid

Odour: slight

Melting point/freezing point: < -70 °C

Boiling point/boiling range: 282 °C

Flash point: 136 °C (Method: Seta closed cup)

Evaporation rate: not determined

Flammability (solid, gas): Not applicable

Self-ignition: 388 °C (Method: ASTM E659)

Vapour pressure: 1.5 Pa (20 °C)

Relative density: 0.9435 (20 °C)

Water solubility: 0.5 - 3.79 g/l (25 °C)

Partition coefficient: noctanol/water: not determined

Auto-ignition temperature: not determined

Decomposition temperature: not determined

Viscosity, dynamic: 5.04 mPa.s (25 °C)

Viscosity, kinematic: 5.3 mm2/s (25 °C)

Explosive properties: Not classified

Oxidizing properties: Not classified

Surface tension: 27.8mN/m, 22 °C

Self-ignition: 398 °C(Method: ASTM E659)

SECTION 10. STABILITY AND REACTIVITY

Reactivity: None reasonably foreseeable.

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: Stable None known.

Conditions to avoid: None known.

Incompatible materials: Strong oxidizing agents, strong acid, strong base

Hazardous decomposition products: Carbon dioxide, Carbon monoxide

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity:

Components: 2,2,4-trimethyl-1,3-pentanediol diisobutyrate:

Acute oral toxicity: LD50 Oral (Rat): > 2,000 mg/kg

Acute inhalation toxicity: LC50 (Rat): > 0.12 mg/l

Acute dermal toxicity: LD50 Dermal (Rabbit): > 2,000 mg/kg

Skin corrosion/irritation: No data available

Serious eye damage/eye irritation: No data available

Carcinogenicity: This information is not available.

Reproductive toxicity: No data available

STOT - single exposure: No data available

STOT - repeated exposure: No data available

Aspiration toxicity: No aspiration toxicity classification

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity: limit of solubility in fresh water.

Persistence and degradability:

Biodegradability: Biodegradation: 70.73 %

Exposure time: 28 d

Method: Ready Biodegradability: CO2 Evolution Test

Bioaccumulative potential:

2,2,4-trimethyl-1,3-pentanediol diisobutyrate:

Bioaccumulation: Species: Fish

Bioconcentration factor (BCF): 1.95.

Species: Fish

Bioconcentration factor (BCF): 183 - 194

Mobility in soil: log Koc: 2.69 - 3.6 (Method: QSAR model)

Other adverse effects: No data available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues: Dispose of in accordance with local regulations.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR: Not regulated as a dangerous good

IMDG-Code: Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Product name: 2,2,4-TRIMETHYL-1,3-PENTANEDIOL-DIISOBUTYRATE

Pollution category: Z

Ship type: 3

ADG: Not regulated as a dangerous good

Packing method: 200kg、950kg

Notes for transport: Before transportation, check whether the packaging container is completely sealed. During transportation, ensure that the container does not leak,

collapse, fall or damage. It is strictly prohibited to mix with oxidants, acids and alkalis for mixed transportation.

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - Candidate List of Substances of Very HighConcern for Authorisation (Article 59): Not applicable

REACH - List of substances subject to authorisation(Annex XIV): Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants: Not applicable.

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and importof dangerous chemicals: Not applicable.

Volatile organic compounds: Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control): Not applicable.

Other regulations: Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

The components of this product are reported in the following inventories:

DSL: All components of this product are on the Canadian DSL

AICS: On the inventory, or in compliance with the inventory

ENCS: On the inventory, or in compliance with the inventory

ISHL: On the inventory, or in compliance with the inventory

KECI: On the inventory, or in compliance with the inventory

PICCS: On the inventory, or in compliance with the inventory

IECSC: On the inventory, or in compliance with the inventory

TCSI: On the inventory, or in compliance with the inventory

TSCA: On the inventory, or in compliance with the inventory

SECTION 16. OTHER INFORMATION

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN -Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS -Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC -No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals;

SADT - SelfAccelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.