

Safety Data Sheet

According to Regulation (EC) No 1907/2006

RD

Version 1.1

Issue date: 15/01/2021

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SDS Record Number: CSSS-TCO-010-120954

Section 1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:

Identification on the label/Trade name: RD
2,2,4-Trimethyl-1,2-dihydroquinoline,
Additional identification: polymerized 1,2-Dihydro-2,2,4-trimethylquinoline, oligomers
Identification of the product: CAS#26780-96-1; EC#500-051-3
Index Number: Not available
REACH registration No.: Not available

1.2 Relevant identified uses of the substance and uses advised against:

1.2.1 Identified uses:

Used as rubber antioxidant.

1.2.2 Uses advised against:

Not available

1.3 Details of the supplier of the safety data sheet:

Supplier(Only representative): Chemical Inspection & Regulation Service Limited
Supplier(Manufacturer): SHANDONG SUNSINE CHEMICAL CO., LTD
Address: ECONOMY TECHNICAL DEVELOPMENT AREA, SHANXIAN CITY,
SHANDONG PROVINCE, CHINA
Contact person(E-mail): sale@sunsine.com
Telephone: +86 530 4686360
Fax: +86-530-4684121

1.4 Emergency telephone Number:

+353 41 980 6916

Available outside office hours? YES ☐ NO ☒

Section 2 Hazards Identification

2.1 Classification of the substance/mixture:

2.1.1 Classification:

The substance is classified as following according to REGULATION (EC) No 1272/2008:

REGULATION (EC) No 1272/2008	
Hazard classes/Hazard categories	Hazard codes
Aquatic Chronic 3	H412

For full text of H- phrases: see section 2.2.

2.2 label elements:

Hazard Pictograms: No pictogram is used
Signal Word(S): No signal word is used
Hazard Statement: H412: Harmful to aquatic life with long lasting effects.
Precautionary statement: P273: Avoid release to the environment.

P501: Dispose of contents/container in accordance with local/
regional/national/international regulation.

2.3 Other hazards:

Not available.

Section 3 Composition/information on ingredients

Substance/Mixture: Substance

Ingredient(s):

Chemical Name	Registration No.	CAS No.	EC No.	Concentration
2,2,4-Trimethyl-1,2-dihydroquinoline, polymerized	N/A	26780-96-1	500-051-3	≥97%

Section 4 First aid measures

4.1 Description of first aid measures:

In all cases of doubt, or when symptoms persist, seek medical attention.

4.1.1 In case of inhalation:

Move to fresh air. If symptoms persist, seek medical advice.

4.1.2 In case of skin contact:

Wash immediately with soap and water.

4.1.3 In case of eyes contact:

Rinse thoroughly with plenty of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. Seek medical advice if irritation develops.

4.1.4 In case of ingestion:

Only when conscious, rinse mouth, give plenty of water to drink. DO NOT induce vomiting. Seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed:

The product is not classified as harmful to human health effect.

4.3 Indication of any immediate medical attention and special treatment needed:

If skin irritation or rash occurs, get medical advice/attention.

Section 5 Fire-Fighting measures

5.1 Extinguishing media:

Suitable extinguishing media: Water spray, water mist, dry chemicals powder, foam, carbon dioxide (CO₂).

Unsuitable extinguishing media: Water jet.

5.2 Special hazards arising from the substance or mixture

Emits toxic fumes under fire conditions: carbon monoxide (CO), nitrous gases (NO_x).

5.3 Advice for firefighters:

Firefighters must wear fire resistant protective equipment. Wear self contained breathing apparatus and protective gloves.

Section 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

6.1.1 For non-emergency personnel: Remove ignition sources. Provide adequate ventilation. Avoid inhalation of vapor or dust. Avoid skin and eye contact. Wear protective gloves/protective clothing/eye protection/face protection.

6.1.2 For emergency responders: Wear an appropriate NIOSH/MSHA approved respirator if dust is generated.

6.2 Environmental Precautions

Do not flush into public water courses. Avoid discharge into the environment.

6.3 Methods for Containment and Cleaning up:	Collect as much as possible in a clean container for (preferable) reuse or disposal.
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 information on disposal.

Section 7 Handling and storage

7.1 Precautions for safe handling:

7.1.1 Protective measures: The usual precautions for handling chemicals should be observed. Dust/air mixtures may ignite violently upon exposure to sparks or sources of ignition. Dust explosion class (VDI 2263): ST 2. Avoid dust generation. Avoid dust accumulation. Avoid dispersing the dust into clouds. Eliminate all sources of ignition, and do not generate flames or sparks.

7.1.2 Advice on general occupational hygiene: Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities: Store in a dry and cool place.

7.3 Specific end use(s): Not applicable.

Section 8 Exposure Controls/Personal Protection

8.1 Control parameters:

8.1.1 Occupational exposure limits: 2,2,4-Trimethyl-1,2-dihydroquinoline, polymerized(CAS#26780-96-1): Long-term exposure limit (TWA) 1mg/m³(Lithuania)

8.1.2 Additional exposure limits under the conditions of use: Not available.

8.1.3 DNEL/DMEL and PNEC-Values:

Workers - Hazard via inhalation route-Systemic effects-Long term exposure-DNEL (Derived No Effect Level): 7 mg/m³

Workers - Hazard via dermal route- Systemic effects- Long term exposure- DNEL (Derived No Effect Level): 1 mg/kg bw/day

General Population - Hazard via inhalation route- Systemic effects- Long term exposure- DNEL (Derived No Effect Level): 1.8 mg/m³

General Population - Hazard via dermal route- Systemic effects- Long term exposure- DNEL (Derived No Effect Level): 0.6 mg/kg bw/day

General Population - Hazard via oral route- Systemic effects- Long term exposure- DNEL (Derived No Effect Level): 0.6 mg/kg bw/day

Hazard for aquatic organisms- PNEC aqua (freshwater): 0.056 mg/L

Hazard for aquatic organisms- PNEC aqua (marine water): 0.006 mg/L

Hazard for aquatic organisms-PNEC aqua (intermittent releases): 0.56 mg/L

Hazard for aquatic organisms- PNEC STP: 100 mg/L

Hazard for aquatic organisms- PNEC sediment (freshwater): 21mg/kg sediment dw

Hazard for aquatic organisms- PNEC sediment (marine water): 2.1mg/kg sediment dw

Hazard for terrestrial organisms- PNEC soil: 4.2mg/kg soil dw

Hazard for predators-PNEC oral: 8 mg/kg food

8.2 Exposure controls:

8.2.1 Appropriate engineering controls: Ensure good ventilation and local exhaustion of the working area. Avoid dust generation.

8.2.2 Individual protection measures, such as personal protective equipment:

Eye/face protection: Wear safety goggles.

Hand protection:	Wear suitable protective gloves.
Body protection:	Wear suitable protective clothing.
Respiratory protection:	Avoid breathing dust. In case of dust formation use suitable respiratory equipment (respirator with filter P2).
Thermal hazards:	Wear suitable protective clothing to prevent heat.
8.2.3 Environmental exposure controls:	Avoid discharge into the environment. According to local regulations, Federal and official regulations.

Section 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance:	Pastilles
Colour:	Light brown
Odour:	Faint, aromatic
Odour threshold:	Not available
pH:	Approx. 7 (Aqueous dispersion)
Melting point/range (°C):	48 °C
Boiling point/range (°C):	Not available
Flash point (°C):	180 °C
Evaporation rate:	Not available
Flammability limit - lower (%):	Not available
Flammability (solid, gas):	Not readily combustible solid
Ignition temperature (°C):	Not available
Upper/lower flammability/explosive limits:	LEL: < 10 mg/l (dust). Minimum ignition energy (MIE): 4 - 12 mJ (Lit.)
Vapour pressure (25°C):	< 0 Pa
Vapour density:	Not available
Relative density:	1.04(20 °C)
Bulk density (kg/m³):	600-630 kg/m³
Water solubility (g/l):	0.0025 - 0.0032 kg/m³ (25 °C)
n-Octanol/Water (log Po/w):	log Pow: >= 1.2 - <= 7.7(25 °C)
Auto-ignition temperature:	450 - 500 °C (Lit.)
Decomposition temperature:	ca. 280 °C
Viscosity, dynamic (mPa.s):	Not available
Explosive properties:	Not available
Oxidising properties:	Not available
Molecular Formula:	C ₁₂ H ₁₅ N
Molecular Weight:	173.25

9.2. Other information:

Fat solubility(solvent– oil to be specified)	Ethanol, acetone, toluene
etc:	
Surface tension:	Not available
Dissociation constant in water(pKa):	ca. 4.95(25 °C)
Oxidation-reduction Potential:	Not available
Specific gravity:	Not available

Section 10 Stability and reactivity

- 10.1 Reactivity:** The substance is stable under normal storage and handling conditions.
- 10.2 Chemical stability:** Stable at room temperature in closed containers under normal storage and handling conditions.
- 10.3 Possibility of hazardous reactions:** No dangerous reactions known.
- 10.4 Conditions to avoid:** Incompatible materials. Heat, sources of heat, naked flames, sparks.
- 10.5 Incompatible materials:** Strong oxidising agents.
- 10.6 Hazardous decomposition products:** Thermal decomposition products: carbon monoxide (CO), nitrous gases (NO_x).

Section 11 Toxicological information

11.1 Information on toxicological effects:

Acute toxicity:

LD50(Oral, Rat): 3 190 mg/kg bw

LD50(Dermal, Rabbit): > 5 100 mg/kg bw

LC50(Inhalation, Rat): Not available

Skin corrosion/Irritation: Not classified

Serious eye damage/irritation: Not classified

Respiratory or skin sensitization: Not classified

Germ cell mutagenicity: Not classified

Carcinogenicity: Not classified

Reproductive toxicity: Not classified

STOT- single exposure: Not classified

STOT-repeated exposure: Not classified

Aspiration hazard: Not classified

Section 12 Ecological information

12.1 Toxicity:

Acute toxicity		Time	Species	Method	Evaluation	Remarks
LC50	54 mg/l	96h	Fish	OECD 203	N/A	N/A
LC50	96 mg/l	48h	Daphnia	OECD 202	N/A	N/A
EC50	>1000mg/l	96h	Algae	OECD 201	N/A	N/A

12.2 Persistence and degradability: Not inherently biodegradable.

12.3 Bioaccumulative potential: BCF: >= 108 - <= 453

12.4 Mobility in soil: log K_{oc} = 3.57

12.5 Results of PBT&vPvB assessment: The substance is not PBT / vPvB.

12.6 Other adverse effects: Harmful to aquatic life with long lasting effects.

Section 13 Disposal considerations

13.1 Waste treatment methods: The material should be disposed of by incineration in a chemical incinerator in compliance with national and regional requirements.

Section 14 Transport information

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

UN Proper shipping name	Not regulated	Not regulated	Not regulated
Transport hazard Class	Not regulated	Not regulated	Not regulated
Packaging group	Not regulated	Not regulated	Not regulated
Environmental hazards	No	No	No
Special precautions for user	See section 2.2	See section 2.2	See section 2.2
Transport in bulk according to Annex II of Marpol and the IBC Code	Not regulated	Not regulated	Not regulated

Section 15 Regulation information

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

Relevant information regarding authorization: Not applicable.

Relevant information regarding restriction: Not applicable.

Other EU regulations: Employment restrictions concerning young person must be observed. For use only by technically qualified individuals.

Other National regulations: Not applicable

15.2 Chemical Safety Assessment has been carried out?

YES

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NO

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Section 16 Other information

16.1 Indication of changes:

Version 1.1 Amended by (EU) 2015/830

16.2 Training instructions:

Not applicable.

16.3 Further information:

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

16.4 Notice to reader:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

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