

Safety Data Sheet

Tinogard® DA

Revision date : 2017/06/14

Version: 4.0

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(30517297/SDS_GEN_US/EN)

1. Identification

Product identifier used on the label

Tinogard® DA

Recommended use of the chemical and restriction on use

Unsuitable for use: This material is not intended for use in products for which prolonged contact with mucous membranes, body fluids or abraded skin, or implantation within the human body, is specifically intended, unless the finished product has been tested in accordance with nationally and internationally applicable safety testing requirements. Because of the wide range of such potential uses, we are not able to recommend this material as safe and effective for such uses and assume no liability for such uses.

Recommended use*: stabilizer; antioxidant

* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:

BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Synonyms: Propanoic acid, 3,3'-thiobis-, 1,1'-didodecyl ester

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

No need for classification according to GHS criteria for this product.

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Label elements

The product does not require a hazard warning label in accordance with GHS criteria.

Hazards not otherwise classified

The product is under certain conditions capable of dust explosion.

Labeling of special preparations (GHS):

This product is not combustible in the form in which it is shipped by the manufacturer, but may form a combustible dust through downstream activities (e.g. grinding, pulverizing) that reduce its particle size.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

This product does not contain any components classified as hazardous under the referenced regulation.

4. First-Aid Measures

Description of first aid measures

General advice:

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

If on skin:

Wash thoroughly with soap and water.

If irritation develops, seek medical attention.

If in eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

If irritation develops, seek medical attention.

If swallowed:

Rinse mouth and then drink plenty of water. Do not induce vomiting. Immediate medical attention required.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Further important symptoms and effects are so far not known.

Indication of any immediate medical attention and special treatment needed

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Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
dry powder, foam

Unsuitable extinguishing media for safety reasons:
carbon dioxide

Additional information:
Avoid whirling up the material/product because of the danger of dust explosion.

Special hazards arising from the substance or mixture

Hazards during fire-fighting:

harmful vapours

Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:

Dusty conditions may ignite explosively in the presence of an ignition source causing flash fire.

6. Accidental release measures

Further accidental release measures:

Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Avoid the formation and build-up of dust - danger of dust explosion. Dust in sufficient concentration can result in an explosive mixture in air. Handle to minimize dusting and eliminate open flame and other sources of ignition.

Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Use personal protective clothing.

Environmental precautions

Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

Nonsparking tools should be used.

7. Handling and Storage

Precautions for safe handling

Breathing must be protected when large quantities are decanted without local exhaust ventilation.

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Closed containers should only be opened in well-ventilated areas. Avoid dust formation. Do not use any sparking tools.

Protection against fire and explosion:

Avoid dust formation. Dust in sufficient concentration can result in an explosive mixture in air. Handle to minimize dusting and eliminate open flame and other sources of ignition. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids (2013 Edition) for safe handling.

Dust explosion class: Dust explosion class 1 (Kst-value >0 up to 200 bar m s⁻¹).

Conditions for safe storage, including any incompatibilities

No applicable information available.

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place.

8. Exposure Controls/Personal Protection

No occupational exposure limits known.

Advice on system design:

It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks.

Personal protective equipment

Respiratory protection:

Respiratory protection may not be required under normal operating conditions if adequate ventilation is provided.

Hand protection:

Wear chemical resistant protective gloves.

Eye protection:

Safety glasses with side-shields.

Body protection:

Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:

Wear protective clothing as necessary to minimize contact. Handle in accordance with good industrial hygiene and safety practice. Handle in accordance with good industrial hygiene and safety practice.

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9. Physical and Chemical Properties

Form:	crystalline, flakes	
Odour:	mild	
Odour threshold:	No applicable information available.	
Colour:	white	
pH value:	6.6 (1 %(m), 20 - 25 °C) (as suspension)	
melting range:	38 - 40 °C	(capillary tube method)
Boiling point:	not applicable	
decomposition point:	> 275 °C	(measured)
Sublimation point:	No applicable information available.	
Flash point:	219 °C	(DIN 51758, closed cup)
Flammability:	not highly flammable	(Regulation 440/2008/EC, A.10)
Lower explosion limit:	For solids not relevant for classification and labelling.	
Upper explosion limit:	For solids not relevant for classification and labelling.	
Autoignition:	320 °C	
Vapour pressure:	0.0000065 Pa (20 °C)	(BAM)
Density:	1.04 g/cm3 (20 °C)	(pycnometer)
Relative density:	No applicable information available.	
Bulk density:	400 - 450 g/m3	
Vapour density:	No applicable information available.	
Partitioning coefficient n-octanol/water (log Pow):	11.8 (25 °C)	(calculated)
Self-ignition temperature:	not self-igniting	
Thermal decomposition:	> 350 °C	
Viscosity, dynamic:	not determined	
Viscosity, kinematic:	No applicable information available.	
% volatiles:	0 %	
	No VOC	
Solubility in water:	< 1 mg/l (20 °C)	
Solubility (quantitative):	No applicable information available.	
Solubility (qualitative):	No applicable information available.	
Molar mass:	514.85 g/mol	
Evaporation rate:	The product is a non-volatile solid.	
Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.	

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals:

No corrosive effect on metal.

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Oxidizing properties:
not fire-propagating

Dust explosivity characteristics:
Kst: 48 m.bar/s
Revaluation 2015

Dust explosion class:
Dust explosion class 1 (Kst-value >0 up to 200 bar m s⁻¹) (St 1)
Formation of flammable gases: Remarks: Forms no flammable gases in the presence of water.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

In spite of the dedusting carried out for reasons of industrial health the product resp. the fine dust of the product is capable of dust explosion.

Conditions to avoid

Avoid dust formation. Avoid deposition of dust. Avoid all sources of ignition: heat, sparks, open flame. Avoid electro-static charge.

Incompatible materials

strong acids, strong bases, strong oxidizing agents

Hazardous decomposition products

Decomposition products:
Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:
> 350 °C

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Virtually nontoxic after a single skin contact. Virtually nontoxic after a single ingestion.

Oral

Type of value: LD50
Species: rat (male/female)
Value: > 5,000 mg/kg (OECD Guideline 401)

Inhalation

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No data available.

Dermal

Type of value: LD50

Species: rat

Value: > 2,000 mg/kg (OECD Guideline 402)

Assessment other acute effects

Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Irritation / corrosion

Assessment of irritating effects: Not irritating to eyes and skin.

Skin

Species: rabbit

Result: non-irritant

Method: Draize test

Eye

Species: rabbit

Result: non-irritant

Method: Draize test

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Sensitization

Assessment of sensitization: Skin sensitizing effects were not observed in animal studies.

Maurer optimisation test

Species: guinea pig

Result: Non-sensitizing.

Guinea pig maximization test

Species: guinea pig

Result: Non-sensitizing.

Method: OECD Guideline 406

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aspiration Hazard

not applicable

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: The substance may cause damage to the heart after repeated ingestion of high doses, as shown in animal studies. Observed effects were reversible.

Genetic toxicity

Assessment of mutagenicity: No mutagenic effect was found in various tests with bacteria and mammalian cell culture. The substance was not mutagenic in a test with mammals.

Carcinogenicity

Assessment of carcinogenicity: Based on the ingredients there is no suspicion of a carcinogenic effect in humans.

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Reproductive toxicity

Assessment of reproduction toxicity: Repeated oral uptake of the substance did not cause damage to the reproductive organs.

Teratogenicity

Assessment of teratogenicity: No indications of a developmental toxic / teratogenic effect were seen in animal studies.

Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Further important symptoms and effects are so far not known.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

No toxic effects occur within the range of solubility. There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish

LC50 (96 h) > 71 mg/l, Brachydanio rerio (OECD Guideline 203, static)

The LC50 is higher than the solubility limit. The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested. The statement of the toxic effect relates to the analytically determined concentration.

Aquatic invertebrates

EC50 (24 h) > 10 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

The EC50 is higher than the solubility limit. The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested. Nominal concentration.

Aquatic plants

EC50 (72 h) 33.9 mg/l (biomass), Scenedesmus subspicatus (Guideline 92/69/EEC, C.3, static)

The EC50 is higher than the solubility limit. The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested. Nominal concentration.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

OECD Guideline 209 aquatic

activated sludge, domestic/EC20 (3 h): > 100 mg/l

Limit concentration test only (LIMIT test). Nominal concentration.

Persistence and degradability

Assessment biodegradation and elimination (H₂O)

Readily biodegradable (according to OECD criteria).

Elimination information

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71 % BOD of the ThOD (28 d) (OECD 301D; EEC 92/69, C.4-E) (aerobic, activated sludge, domestic, non-adapted)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Assessment of stability in water

Study scientifically not justified.

Bioaccumulative potential

Assessment bioaccumulation potential

Significant accumulation in organisms is not to be expected.

Bioaccumulation potential

The product has not been tested. The statement has been derived from the structure of the product.

Mobility in soil

Assessment transport between environmental compartments

The substance will not evaporate into the atmosphere from the water surface.

Additional information

Other ecotoxicological advice:

Do not discharge product into the environment without control. The product has not been tested. The statement has been derived from the properties of the individual components.

13. Disposal considerations

Waste disposal of substance:

Do not discharge into drains/surface waters/groundwater. Dispose of in accordance with national, state and local regulations.

Container disposal:

Dispose of in accordance with national, state and local regulations. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

14. Transport Information

Land transport

USDOT

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations

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15. Regulatory Information

VOC content:

No VOC

Federal Regulations

Registration status:

Chemical TSCA, US released / listed

Cosmetic TSCA, US released / exempt

EPCRA 311/312 (Hazard categories): Not hazardous;

NFPA Hazard codes:

Health : 1 Fire: 1 Reactivity: 0 Special:

HMIS III rating

Health: 1 Flammability: 1 Physical hazard: 0

16. Other Information

SDS Prepared by:

BASF NA Product Regulations

SDS Prepared on: 2017/06/14

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