We create chemistry

Safety Data Sheet
Tinogard® TT

1. Identification

Product identifier used on the label

Tinogard® TT

Recommended use of the chemical and restriction on use

Recommended use*: antioxidant; stabilizer; Chemical for soaps, detergents and cosmetic
Unsuitable for use: The product has not been tested and is therefore not recommended to be used in contact with mucous membranes, abraded skin, or blood; or for the manufacture of implants for the human body. For detailed regulatory information please request a Food Contact Certificate (FCC).

* 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: Pentaerythritol tetrakis(3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate)

2. Hazards Identification

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

Classification of the product

Combustible Dust Combustible Dust (1) Combustible Dust

Label elements

Signal Word:

Warning

Hazard Statement:
May form combustible dust concentration in air.

Hazards not otherwise classified

The product is under certain conditions capable of dust explosion.

3. Composition / Information on Ingredients

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

Under the referenced regulation, this product does not contain any components classified for health hazards above the relevant cut off value.

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:
Remove contaminated clothing. Rinse skin immediately with plenty of water for 15 - 20 minutes. 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.

Indication of any immediate medical attention and special treatment needed

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, carbon dioxide, alcohol-resistant foam

Unsuitable extinguishing media for safety reasons:
water jet

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.

Impact Sensitivity:

Number of positive reactions:	0
Assessment:	not shock-sensitive

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.

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 2 (Kst-value 200 up to 300 bar m s-1).

Conditions for safe storage, including any incompatibilities
The product in undamaged packing need not be stored separately.

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

Storage stability:
Storage temperature: < 40 °C
Protect from temperatures above: 40 °C

8. Exposure Controls/Personal Protection

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.

9. Physical and Chemical Properties

Form:	powder
Odour:	odourless

Odour threshold:	No data available.	
Colour:	white	
pH value:	5.9 (20 °C)	
Melting temperature:	117.1 °C (approx. 1,013 hPa)	(measured)
boiling temperature:	281 °C (1,013 hPa)	(OECD Guideline 103)
Sublimation point:	No data available.	
Flash point:	not applicable	
Flammability:	not flammable	(Directive 92/69/EEC, 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:	400 °C	
Vapour pressure:	0.0133322 hPa (20 °C)	(measured)
Density:	1,116 g/cm3 (20 °C)	
Relative density:	No data available.	
Bulk density:	300 - 600 kg/m3	
Vapour density:	No data available.	
Partitioning coefficient n-octanol/water (log Pow):	> 8 (25 °C)	(Calculation Hansch/Leo)
Self-ignition temperature:	not relevant	
Thermal decomposition:	> 350 °C	
Viscosity, dynamic:	not relevant	
Solubility in water:	< 0.1 mg/l (20 °C)	
Solubility (quantitative):	No data available.	
Solubility (qualitative):	No data available.	
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.

Oxidizing properties:
Based on its structural properties the product is not classified as oxidizing.

Dust explosivity characteristics:
Kst: 210 m.bar/s
Revaluation 2015

Dust explosion class:
Dust explosion class 2 (Kst-value 200 up to 300 bar m s-1) (St 2)

Chemical stability

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

Possibility of hazardous reactions
The product is chemically stable.
Dust explosion hazard.

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 ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact.

Oral
Type of value: LD50
Species: rat
Value: > 5,000 mg/kg

Inhalation
Type of value: LC0
Species: rat
Value: > 46 mg/l
Exposure time: 1 h

Dermal
Type of value: LD50
Species: rat
Value: > 2,000 mg/kg

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

Eye
Species: rabbit
Result: non-irritant

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

other
Species: guinea pig
Result: Non-sensitizing.

Species: guinea pig
No sensitizing effect.

Patch-Test
Species: human
Result: Non-sensitizing.

Aspiration Hazard
No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: No substance-specific organtoxicity was observed after repeated administration to animals.
Repeated oral uptake of the substance did not cause substance-related effects.

Genetic toxicity
Assessment of mutagenicity: The substance was not mutagenic in bacteria. The substance was not mutagenic in studies with mammals.
The substance was not genotoxic in a test with mammals.
Genetic toxicity in vitro: Ames-test Salmonella typhimurium:with and without metabolic activation negative

Carcinogenicity
Assessment of carcinogenicity: None of the components in this product at concentrations greater than 0.1% are listed by IARC; NTP, OSHA or ACGIH as a carcinogen. No carcinogenic effects reported.
In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.

Reproductive toxicity
Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect.

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.

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.

Toxicity to fish
LC50 (96 h) > 100 mg/l, Brachydanio rerio (OECD Guideline 203)

Aquatic invertebrates
EC50 (24 h) > 86 mg/l, Daphnia magna (OECD Guideline 202, part 1)
Tested above maximum solubility.

Aquatic plants
EC50 (72 h) > 100 mg/l, Scenedesmus sp. (Guideline 92/69/EEC, C.3)

Chronic toxicity to fish
No data available regarding toxicity to fish.

Chronic toxicity to aquatic invertebrates
No observed effect concentration (21 d) >= 2 mg/l, Daphnia magna (OECD Guideline 211, semistatic)
The product has low solubility in the test medium. A saturated solution has been tested. Limit concentration test only (LIMIT test). The details of the toxic effect relate to the nominal concentration.
No toxic effects occur within the range of solubility.

Assessment of terrestrial toxicity
No data available concerning terrestrial toxicity.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms
OECD Guideline 209 activated sludge/EC50 (3 h): > 100 mg/l

Persistence and degradability

Assessment biodegradation and elimination (H2O)
The product is virtually insoluble in water and can thus be separated from water mechanically in suitable effluent treatment plants.

Elimination information

45 % (28 d) (OECD 303A; ISO 11733; 92/69 EEC,V, C.10) Moderately/partially eliminated from water.

5 % (28 d) (OECD 301B; ISO 9439; 92/69/EEC, C.4-C) Not readily biodegradable.

Assessment of stability in water
Study technically not feasible.

Information on Stability in Water (Hydrolysis)
approx. $t_{1/2}$ 2.06 a (25 °C), (pH 7)
In contact with water the substance will hydrolyse slowly.

Assessment photodegration
After evaporation or exposure to the air, the product will be rapidly degraded by photochemical processes.

Bioaccumulative potential

Bioaccumulation potential
Bioconcentration factor: < 2.3 (OECD Guideline 305 C)

Mobility in soil

Assessment transport between environmental compartments
The substance will not evaporate into the atmosphere from the water surface.
Adsorption to solid soil phase is expected.

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

15. Regulatory Information

Federal Regulations

Registration status:

Chemical	TSCA, US	released / listed
Cosmetic	TSCA, US	released / exempt

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:

WARNING: This product can expose you to chemicals including METHANOL, which is known to the State of California to cause birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

NFPA Hazard codes:
Health: 0 Fire: 2 Reactivity: 0 Special:

HMIS III rating
Health: 0 Flammability: 2 Physical hazard: 0

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2018/09/06

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