

# Safety Data Sheet

## Tinuvin® 770 DF

Revision date : 2021/07/07

Version: 7.2

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(30546638/SDS\_GEN\_CA/EN)

### 1. Identification

#### Product identifier used on the label

## Tinuvin® 770 DF

#### Recommended use of the chemical and restriction on use

Recommended use\*: stabilizer

Unsuitable for use: The product is not recommended to be used in contact with mucous membranes, abraded skin, or blood; or for the manufacture of implants for the human body as it has not been tested for these applications.

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 Canada Inc.  
5025 Creekbank Road  
Building A, Floor 2  
Mississauga, ON, L4W 0B6, CANADA

Telephone: +1 289 360-1300

#### Emergency telephone number

##### 24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300  
BASF HOTLINE: (800) 454-COPE (2673)

#### Other means of identification

Synonyms: bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate

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### 2. Hazards Identification

#### According to Hazardous Products Regulations (HPR) (SOR/2015-17)

##### Classification of the product

Eye Dam./Irrit.	1	Serious eye damage/eye irritation
Aquatic Acute	1	Hazardous to the aquatic environment - acute

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Aquatic Chronic Repr.	2 2 (fertility)	Hazardous to the aquatic environment - chronic Reproductive toxicity
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### Label elements

Pictogram:



Signal Word:

Danger

Hazard Statement:

H318	Causes serious eye damage.
H361	Suspected of damaging fertility.
H411	Toxic to aquatic life with long lasting effects.
H400	Very toxic to aquatic life.

Precautionary Statements (Prevention):

P280	Wear protective gloves, protective clothing and eye protection or face protection.
P273	Avoid release to the environment.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.

Precautionary Statements (Response):

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or physician.
P308 + P313	IF exposed or concerned: Get medical attention.
P391	Collect spillage.

Precautionary Statements (Storage):

P405	Store locked up.
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Precautionary Statements (Disposal):

P501	Dispose of contents/container in accordance with local regulations.
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### Hazards not otherwise classified

The product is under certain conditions capable of dust explosion.

Labeling of special preparations (GHS):

To avoid inhalation hazard, do not grind.

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.

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## 3. Composition / Information on Ingredients

### According to Hazardous Products Regulations (HPR) (SOR/2015-17)

bis(2,2,6,6-tetramethyl-4-piperidyl)sebacate  
CAS Number: 52829-07-9

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Content (W/W): 100.0 %

Synonym: Decanedioic acid bis(2,2,6,6-tetramethyl-4-piperidiny) ester;

Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate

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### 4. First-Aid Measures

#### Description of first aid measures

##### General advice:

Immediately remove contaminated clothing. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). First aid personnel should pay attention to their own safety.

##### If inhaled:

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

##### If on skin:

Immediately wash thoroughly with soap and water, seek medical attention.

##### If in eyes:

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

##### If swallowed:

Rinse mouth immediately with water. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Do not induce vomiting due to aspiration hazard. Seek medical attention.

#### Most important symptoms and effects, both acute and delayed

Symptoms: Overexposure may cause:., corneal injury, skin corrosion, severe pain, coughing, respiratory disorders, dyspnea, nausea, headache, vomiting, dizziness, diarrhea, abdominal cramps

#### 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, administer corticosteroid dose aerosol to prevent pulmonary edema.

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### 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.

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### 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:

Assessment: no

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## 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.

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## 7. Handling and Storage

### Precautions for safe handling

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

Avoid inhalation of dusts.

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).

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### Conditions for safe storage, including any incompatibilities

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

The packed product is not damaged by low temperatures or by frost.

The packed product will not be damaged by high temperatures.

## 8. Exposure Controls/Personal Protection

No substance specific occupational exposure limits known.

The nuisance dust limit value is to be kept.

Particles, not otherwise specified, respirable	ACGIH, US:	TWA value 3 mg/m3 Respirable particles ;
	OSHA Z1A:	TWA value 5 mg/m3 Respirable fraction ;
	OSHA Z1A:	TWA value 15 mg/m3 Total dust ;
	OSHA Z3:	TWA value 5 mg/m3 Respirable fraction ;
	OSHA Z3:	TWA value 15 mg/m3 Total dust ;
	OSHA Z3:	TWA value 50 millions of particles per cubic foot of air Total dust ;
	OSHA Z3:	TWA value 15 millions of particles per cubic foot of air Respirable fraction ;

Particles, not otherwise specified, inhalable	ACGIH, US:	TWA value 10 mg/m3 Inhalable particles ;
	OSHA Z1A:	TWA value 15 mg/m3 Total dust ;
	OSHA Z3:	TWA value 15 mg/m3 Total dust ;
	OSHA Z3:	TWA value 50 millions of particles per cubic foot of air Total dust ;

### 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:

Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator.

#### Hand protection:

Wear chemical resistant protective gloves.

#### Eye protection:

Tightly fitting safety goggles (chemical goggles) and face shield.

#### Body protection:

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

#### General safety and hygiene measures:

No eating, drinking, smoking or tobacco use at the place of work. Handle in accordance with good industrial hygiene and safety practice.

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### 9. Physical and Chemical Properties

Form:	granules, crystalline	
Odour:	odourless	
Odour threshold:	No data available.	
Colour:	white to cream	
pH value:	9.7 ( 1 %(m), 20 - 25 °C) (as suspension)	
Melting point:	81 - 85 °C	
Freezing point:	No data available.	
Boiling point:	> 350 °C ( 1,013 hPa)	(calculated)
Sublimation point:	No data available.	
Flash point:	> 150 °C	(DIN 51584)
Flammability:	not highly flammable	(Directive 84/449/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:	310 °C	(BAM)
Vapour pressure:	0.0000013 hPa ( 20 °C)	
Density:	1.05 g/cm <sup>3</sup> ( 20 °C)	
Relative density:	No data available.	
Bulk density:	470 - 510 kg/m <sup>3</sup>	
Vapour density:	No data available.	
Partitioning coefficient n- octanol/water (log Pow):	0.35 ( 20 - 25 °C)	
Self-ignition temperature:	not applicable	
	Based on its structural properties the product is not classified as self- igniting.	
Thermal decomposition:	> 350 °C (dynamic (Lütolf oven))	
Viscosity, dynamic:	not determined	
Viscosity, kinematic:	No data available.	
% volatiles:	0.5 %	
Solubility in water:	< 100 mg/l ( 20 °C)	
Solubility (quantitative):	No data available.	
Solubility (qualitative):	No data available.	
Molar mass:	480.73 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:

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

### Dust explosivity characteristics:

Kst: 272 m.bar/s

Revaluation 2015

### Dust explosion class:

Dust explosion class 2 (Kst-value 200 up to 300 bar m s<sup>-1</sup>) (St 2)

### Minimum ignition energy:

No data available.

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

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 (dynamic (Lütolf oven))

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## 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: Overexposure to dust may cause lung damage.

#### Oral

Type of value: LD50

Species: rat (male/female)

Value: 3,700 mg/kg (similar to OECD guideline 401)

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### Inhalation

Type of value: LC50

Species: rat

Value: 0.5 mg/l

Exposure time: 4 h

An aerosol with respirable particles was tested.

### Dermal

Type of value: LD50

Species: rat (male/female)

Value: > 3,170 mg/kg (similar to 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 the skin. May cause severe damage to the eyes.

### Skin

Species: rabbit

Result: non-irritant

Method: OECD Guideline 404

### Eye

Species: rabbit

Result: Severely irritating.

Method: OECD Guideline 405

### Sensitization

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

Human data do not fully exclude a skin sensitizing potential.

Guinea pig maximization test

Species: guinea pig

Result: Non-sensitizing.

Method: OECD Guideline 406

### Aspiration Hazard

not applicable

## **Chronic Toxicity/Effects**

### Repeated dose toxicity

Assessment of repeated dose toxicity: The substance may cause damage to the peripheral nervous system after repeated ingestion. The substance may cause damage to the central nervous system after repeated ingestion. May cause body weight changes.

### Genetic toxicity

Assessment of mutagenicity: No mutagenic effect was found in various tests with bacteria and mammalian cell culture.

### Carcinogenicity

Assessment of carcinogenicity: The whole of the information assessable provides no indication of a carcinogenic effect.



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### Reproductive toxicity

Assessment of reproduction toxicity: The results of animal studies suggest a fertility impairing effect.

### Teratogenicity

Assessment of teratogenicity: The substance did not cause malformations in animal studies; however, toxicity to development was observed at high doses which impaired body weight gain in parental animals.

### Other Information

There is no formation of respirable dust during intended uses. However, if dust formation occurs at processing/finishing processing steps like regranulation, mechanical machining (for example drilling, grinding etc.), occupational protection regulations have to be considered.

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## 12. Ecological Information

### **Toxicity**

#### Aquatic toxicity

Assessment of aquatic toxicity:

Very toxic (acute effect) to aquatic organisms. Toxic to aquatic organisms based on long-term (chronic) toxicity study data. 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) 4.4 mg/l, *Lepomis macrochirus* (OECD 203; ISO 7346; 92/69/EEC, C.1, Flow through.)

The statement of the toxic effect relates to the analytically determined concentration.

#### Aquatic invertebrates

EC50 (48 h) 8.6 mg/l, *Daphnia magna* (OECD Guideline 202, part 1, static)

The statement of the toxic effect relates to the analytically determined concentration.

#### Aquatic plants

EC10 (72 h) 0.188 mg/l (growth rate), *Pseudokirchneriella subcapitata* (OECD Guideline 201, static)

EC50 (72 h) 0.705 mg/l (growth rate), *Pseudokirchneriella subcapitata* (OECD Guideline 201, static)

#### Chronic toxicity to fish

Study scientifically not justified.

#### Chronic toxicity to aquatic invertebrates

No observed effect concentration (21 d) 0.23 mg/l, *Daphnia magna* (OECD Guideline 211, semistatic)

The statement of the toxic effect relates to the analytically determined concentration.

#### Assessment of terrestrial toxicity

No data available.

### **Microorganisms/Effect on activated sludge**

#### Toxicity to microorganisms

OECD Guideline 209 aerobic

activated sludge/EC50 (3 h): > 100 mg/l

Nominal concentration.

### **Persistence and degradability**

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### Assessment biodegradation and elimination (H<sub>2</sub>O)

Moderately/partially biodegradable.

### Elimination information

24 % CO<sub>2</sub> formation relative to the theoretical value (28 d) (Directive 84/449/EEC, C.5) (aerobic, activated sludge) Moderately/partially biodegradable.

### Assessment of stability in water

In contact with water the substance will hydrolyse slowly.

## **Bioaccumulative potential**

### Assessment bioaccumulation potential

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

### Bioaccumulation potential

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

## **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.

## **Additional information**

Other ecotoxicological advice:

Do not discharge product into the environment without control.

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## **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.

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## **14. Transport Information**

### **Land transport**

TDG

Not classified as a dangerous good under transport regulations

### **Sea transport**

IMDG

Hazard class: 9

Packing group: III

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ID number: UN 3077  
Hazard label: 9, EHSM  
Marine pollutant: YES  
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(contains BIS(2,2,6,6-TETRAMETHYL-4-PIPERIDYL) SEBACATE)

### Air transport

IATA/ICAO

Hazard class: 9  
Packing group: III  
ID number: UN 3077  
Hazard label: 9, EHSM  
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(contains BIS(2,2,6,6-TETRAMETHYL-4-PIPERIDYL) SEBACATE)

## 15. Regulatory Information

### Federal Regulations

#### Registration status:

Chemical DSL, CA released / listed

#### NFPA Hazard codes:

Health: 3 Fire: 1 Reactivity: 0 Special:

## 16. Other Information

### SDS Prepared by:

BASF NA Product Regulations

SDS Prepared on: 2021/07/07

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