

# Material Safety Data Sheet

OSHA / ANSI Z400.1-2004 Compliant

Ciba

Release: 1.0

Date / Revised: 05-10-2007

Product: TINUVIN 770 DF

## NFPA Hazard codes:

Health: 3      Fire: 1      Reactivity: 0      Special:

## HMIS III rating

Health: 3      Flammability: 1      Physical hazard: 0      Personal protection: X

HMIS Note: \* Indicates possible chronic health effects.

## 1. Identification of the Substance/Preparation and of the Company/Undertaking

### Company Information

Company: Ciba Specialty Chemicals Corporation  
540 White Plains Road  
P.O. Box 2005  
Tarrytown, NY 10591-9005  
U.S.A.  
Customer Service / Product Information: 1-800-474-4731  
MSDS Request Line: 1-800-431-2360

### Emergency Information

Emergency 24-Hour Health/Environmental Phone: (24h) +1-800-873-1138  
CHEMTREC: (800) 424-9300 (24hrs) or (703) 527-3887

### Product Information

Product: TINUVIN 770 DF  
Use: stabilizer

## 2. Hazards Identification

### Emergency overview

Signal word: WARNING !  
Colour: white  
Appearance: granules, crystalline  
State of matter: solid  
Odour: odourless  
Health: This product is corrosive to eyes and is a skin and respiratory irritant, and may cause skin sensitization. Avoid contact., The product is slightly toxic, and may cause a bitter metallic taste in the mouth.  
Physical/Chemical hazards: Refer to MSDS Section 7 for Dust Explosion information.

### Potential health effects

Primary routes of entry:  
Ingestion, Skin, Inhalation, Eyes

### Potential environmental effects

This product is moderately toxic to aquatic organisms. Releases to the environment are to be avoided.

## 3. Composition/Information on Ingredients

Chemical name	CAS Number	Content (Weight)	Hazardous
Decanedioic acid, bis(2,2,6,6-tetramethyl-4-	52829-07-9	50.0 - 100.0 %	Y

# Material Safety Data Sheet

OSHA / ANSI Z400.1-2004 Compliant

Ciba

Date / Revised: 05-10-2007

Release: 1.0

Product: TINUVIN 770 DF

piperidinyl) ester

This material is classified as hazardous under OSHA regulations.

## 4. First-aid Measures

### Inhalation:

Remove to fresh air, if not breathing give artificial respiration. If breathing is difficult, give oxygen and get immediate medical attention.

### Skin:

After contact with skin, wash immediately with plenty of water and soap.  
Get medical attention if irritation occurs.

### Eyes:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

### Ingestion:

Do not induce vomiting. If vomiting occurs naturally, have casualty lean forward to reduce the risk of aspiration.  
Seek medical attention immediately.

### Notes to physician:

May aggravate pre-existing skin conditions, allergies, eczema or respiratory problems. Treat symptomatically.

## 5. Fire-fighting Measures

### Suitable extinguishing media:

carbon dioxide, dry powder, foam, water fog

### Hazardous combustion products:

Burning may produce toxic combustion products.

### Hazards during fire-fighting:

Standard procedure for chemical fires.

The product can form an explosive dust/air mixture. For further information, see Section 7 Explosion Hazards.

### Protective equipment for fire-fighting:

Wear self-contained breathing apparatus and chemical-protective clothing.

## 6. Accidental Release Measures

### Cleanup:

Sweep up and shovel into suitable containers for disposal.  
Avoid raising dust.  
Wear suitable protective equipment.  
Should not be released into the environment.

## 7. Handling and Storage

### Handling

#### General advice:

As with all industrial chemicals, use good industrial practices when handling. Avoid eye, skin, and clothing contact.  
Do not inhale. Do not taste or swallow. Use only with adequate ventilation.

# Material Safety Data Sheet

OSHA / ANSI Z400.1-2004 Compliant

Ciba

Release: 1.0

Date / Revised: 05-10-2007

Product: TINUVIN 770 DF

## Protection against fire and explosion:

Combustible powder. - Avoid creating dusty conditions. - Grounding is required when emptying into a conductive container. - When flammable solvents are present, the container must be inerted or the system otherwise designed to prevent or contain an explosion. Seek expert advice. In addition, for products packaged in fused-lined (coated) fiber drums, fiber drums with conductive liners, steel drums, steel pails, and Type "C" FIBC (bulk bags), or other conductive the following instructions also apply: - Always ground this package before emptying. The user is responsible for designing the system to handle solid and ensuring proper training of employees in the system's use.

## Storage

### General advice:

Keep container tightly closed in a dry, cool and well-ventilated place.  
Protect from light.

> for industrial use only <

## 8. Exposure Controls and Personal Protection

### Exposure Guidelines

Decanedioic acid, bis(2,2,6,6-tetramethyl-4-piperidiny) ester (52829-07-9)	CIEL	8h TWA: 1 mg/m3 (Inhalable)
--	------	-----------------------------

### Engineering Controls:

Work in well ventilated areas. Do not breathe dust.

### Personal protective equipment

#### Respiratory protection:

Wear a NIOSH-certified respirator as necessary.

#### Eye protection:

Wear safety goggles (chemical goggles) if there is potential for airborne dust exposures.

#### Body protection:

Wear chemical resistant gloves and protective clothing.

#### General safety and hygiene measures:

There are no OSHA or ACGIH exposure guidelines available for component(s) in this product.  
Eye wash station and safety shower should be available in immediate work area. Select additional protective equipment based upon potential for exposure.

## 9. Physical and Chemical Properties

Colour:	white	
Form:	granules, crystalline	
State of matter:	solid	
Odour:	odourless	
pH value:	9.7	(20 - 25 °C) (as suspension)
Flash point:	> 150 °C	(DIN 51584)
Self-ignition temperature:		Not tested
Dust explosion class:	Heavy Dust Explosion. (2)	(20 kg ball at 10'000 Joule)
Melting point:	81 - 85 °C	
Boiling point:		Not applicable
Vapour pressure:	13 nPa	(20 °C)
Density:	1.05 g/cm3	(20 °C)
Partitioning coefficient n-octanol/water (log Pow):	0.35	(20 - 25 °C)
% Volatiles:	0.5 %	

# Material Safety Data Sheet

OSHA / ANSI Z400.1-2004 Compliant

Ciba

Date / Revised: 05-10-2007

Release: 1.0

Product: TINUVIN 770 DF

Solubility in water:	< 1 mg/l	( 20 °C)
Autoignition:	310 °C	(BAM)
Decomposition temperature:	> 350 °C	(Temperature program (L0tolf))

## 10. Stability and Reactivity

### Stability:

Stable.

Conditions to avoid: Avoid electro-static discharge. Avoid sources of ignition.

Substances to avoid: Strong oxidizing agents, strong acids, strong bases.

Possibility of Hazardous Reactions: No hazardous reactions known.

Hazardous decomposition products: No decomposition expected under normal storage conditions.

## 11. Toxicological Information

### Acute oral toxicity:

LD50 / oral / rat: > 2,000 mg/kg

### Acute inhalation toxicity:

LC50 / by inhalation / rat: > 960 mg/m<sup>3</sup>

for a 4 Hr dust exposure, essentially all particles >10 microns. There were neither mortalities nor gross pathological alterations, but salivation, lacrimation and changes in activity were seen.

### Acute dermal toxicity:

LD50 / dermal / rat: > 2,000 mg/kg

### Skin irritation:

(Humans) Primary skin irritant when applied neat

### Eye irritation:

(Rabbits) Corrosive due to corneal reactions not clearing over a 7-14 day observation period.

### Skin Sensitization:

(Guinea Pig) Not a sensitizer. (Humans) (Maximization test) Primary skin irritant when applied neat, sensitization seen in 2 of 50 subjects.

### Subchronic Toxicity:

4-week oral studies (rats): Rats were dosed with from 50 - 2,000 mg/kg/day for 4-weeks by gavage. Doses of 600 mg/kg and greater caused deaths, salivation, tremors and sedation. Specialized investigations indicated an interaction with norepinephrine. The NOEL was found to be 50 mg/kg/day. 13-week study (Rats): Rats were treated with the test article in the diet, at concentration levels of 0, 400, 1,300 and 4,000 ppm for 13 weeks. The only changes seen were increases in body weight gain and food consumption. Based on this, the NOEL was found to be 400 ppm, equivalent to about 27 mg/kg/day. 90-day study (dogs): Beagle dogs were fed the test substance in the diet for 90 days at concentrations of 0, 800, 2,600 and 8,000 ppm. Due to palatability problems, the high dose group was adjusted to 5,000 ppm. The high-dose changes were attributed to poor food intake during the first six weeks. As a consequence, the NOEL was considered to be 2,600 ppm, equivalent to about 74 mg/kg/day. Dust inhalation (rats): Four groups of rats were exposed 6 hours per day, 5 days per week for a period of three weeks to a target concentration of either 0.3, 15 or 75 mg/m<sup>3</sup> air. Following the final exposure, 5 males and 5 females from each group were sacrificed, the remaining animals were observed for 14 days and then sacrificed. In addition, blood pressures were monitored on 5 male and 5 female rats from each group on exposure days 1, 5, 10 and 15. There were no abnormalities or blood pressure changes noted, except for local rhinitis in the nasal mucosa.

### Genetic toxicity:

Ames Test: negative  
Non-mutagenic.

# Material Safety Data Sheet

OSHA / ANSI Z400.1-2004 Compliant

Ciba

Date / Revised: 06-10-2007

Release: 1.0

Product: TINUVIN 770 DF

## 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.

## Reproductive toxicity:

not determined

## Developmental toxicity/teratogenicity:

not determined

## Neurotoxicity:

Not determined

## 12. Ecological Information

### Toxicity to fish:

Oncorhynchus mykiss/96 h/LC50: 13 mg/l (OECD Guide-line 203)

### Toxicity to aquatic invertebrates:

Daphnia magna/24 h/EC50: 17 mg/l (OECD 202)

### Toxicity to aquatic plants:

Scenedesmus sp./72 h: 1.9 mg/l (Guideline 92/69/EEC, C.3)

### Toxicity to microorganisms:

activated sludge/3 h/IC50: > 100 mg/l (OECD 209)

### Biodegradation:

Test method: OECD 301E

Degree of elimination: (28 Days)

Evaluation: Moderately/partially biodegradable.

Test method: Directive 84/449/EEC, C.5

Degree of elimination: (28 Days)

Evaluation: Not readily biodegradable.

## 13. Disposal Considerations

### Waste disposal of substance:

Dispose of in accordance with national, state and local regulations.

Resource Conservation and Recovery Act (RCRA): Not a hazardous waste under RCRA (40 CFR 261).

## 14. Transport Information

### U.S. Department of Transportation

The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors.

### Road transport:

Special shipping information: Not classified as a dangerous good under transport regulations.

### Air transport:

Special shipping information: Not classified as a dangerous good under transport regulations.

### Inland-waterway transport:

Special shipping information: Not classified as a dangerous good under transport regulations.

# Material Safety Data Sheet

OSHA / ANSI Z400.1-2004 Compliant



Date / Revised: 05-10-2007

Release: 1.0

Product: TINUVIN 770 DF

## 15. Regulatory Information

US: Toxic Substances Control Act (TSCA):

All component(s) comprising this product are either exempt or listed on the TSCA inventory

Canada: Domestic Substances List (DSL):

All components either exempt or listed on the DSL

### United States - Regulations

#### SARA Section 311/312 Hazard Communication Standard:

Acute Health:	Y	Fire:	N
Chronic Health:	N	Reactivity:	N
		Sudden release of pressure:	N

#### SARA Reportable Quantities:

No components listed.

#### SARA Section 313 Toxic Chemical List:

No components listed.

#### OSHA hazard category:

This material is classified as hazardous under OSHA regulations.

#### Toxic Substances Control Act (TSCA) Significant New Use Rule (SNUR):

This product is not subject to a Significant New Use Rule (SNUR).

#### Toxic Substances Control Act (TSCA) Section 5(e) Consent Orders:

This product is not subject to a Section 5(e) Consent Order.

#### Toxic Substances Control Act (TSCA) Section 5(f):

This product is not subject to a Section 5(f)/6(a) rule.

#### Toxic Substances Control Act (TSCA) Section 12(b) Export Notification:

No components listed.

#### Clean Air Act - Hazardous Air Pollutants (HAP):

This product does not contain any Hazardous Air Pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

#### Clean Air Act 111 - Volatile Organic Compounds (VOC):

This product does not contain any Significant Intermediate or Final Volatile Organic Compounds (VOC), as defined by the U.S. Clean Air Act Section 111 (40 CFR 60.489).

#### Clean Air Act 602 - Ozone Depleting Substances (ODS):

This product neither contains, nor was manufactured with, a Class I or Class II ozone depleting substance (ODS), as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App. A+B).

#### Clean Water Act - Priority Pollutants (PP):

This product does not contain any priority pollutants listed under the U.S. Clean Water Act Section 307(2)(1) Priority Pollutant List (40 CFR 401.15).

#### Pennsylvania Right to Know:

This product does not contain any components that are subject to the Pennsylvania Right-To-Know disclosure requirement.

#### California Proposition 65 - Chemicals Known to the State to Cause Cancer:

No components listed.

#### California Proposition 65 - Chemicals Known to the State to Cause Reproductive Toxicity:

No components listed.

# Material Safety Data Sheet

OSHA / ANSI Z400.1-2004 Compliant

Ciba

Date / Revised: 05-10-2007

Release: 1.0

Product: TINUVIN 770 DF

## International Regulations

### **Chemical Weapons Convention:**

This product does not contain any component(s) listed under the Chemical Weapons Convention Schedule of Chemicals.

## **16. Other Information:**

### **Disclaimer:**

The information contained herein is based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to such data or information. The user is responsible for determining whether the product is suitable for its intended conditions of use.

END OF DATA SHEET