Safety Data Sheet
TINUVIN® 783 FDL

1. Product and Company Identification

Company
BASF CORPORATION
100 Campus Drive
Florham Park, NJ 07932
USA

24 Hour Emergency Response Information
CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP

Registrant:

2. Hazards Identification

Emergency overview

Signal word:	WARNING !
Colour:	White to off-white
Appearance:	pastilles
State of matter:	solid
Odour:	odourless
Health:	Inhalation may cause respiratory irritation., Repeated exposure orally, and potentially by inhalation, may cause effects on the liver, lymph nodes, spleen and blood, based on animal studies.
Physical/Chemical hazards:	Refer to MSDS Section 7 for Dust Explosion information.

Potential environmental effects

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

3. Composition/Information on Ingredients

Chemical name	CAS Number	Content (Weight)	Hazardous
Butanedioic acid, dimethyl ester, polymer with 4-hydroxy-2,2,6,6-tetramethyl-1-piperidineethanol (9CI)	65447-77-0	50.0 - 100.0 %	Y
Poly[[6-[1,1,3,3-tetramethylbutyl)amino]-s-triazine-2,4-diyl][(2,2,6,6-tetramethyl-4-piperidyl)imino] hexamethylene[(2,2,6,6-tetrame	70624-18-9	50.0 - 100.0 %	Y

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 or eczema; liverdisease and jaundice; or blood disorders.

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.

Protection against fire and explosion:

Danger! Explosion Risk - Combustible powder. - Risk of explosion if an air-dust mixture forms. - Avoid creating dusty conditions. - Empty only into grounded containers. - If container is larger than 550 gallons (2m3) or if 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), 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.

> for industrial use only <

8. Exposure Controls and Personal Protection

Exposure Guidelines

Butanedioic acid, dimethyl ester, polymer with 4-hydroxy-2,2,6,6-tetramethyl-1-piperidineethanol (9CI) (65447-77-0)	CIEL	8h TWA: 10 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 to off-white	
Form:	pastilles	
State of matter:	solid	
Odour:	odourless	
pH value:	6.0	(20 - 25 °C) 1% Aqueous suspension (w:v)
Flammability:	Not tested	
Flash point:	192 °C	(DIN 51758)
Self-ignition temperature:		Not tested
Melting point:	55 - 140 °C	
Boiling point:		Not applicable
Vapour pressure:		Not tested
Density:	1.0 - 1.2 g/cm3	(20 °C)

Partitioning coefficient n-octanol/water (log Pow):		Not tested
% Volatiles:		not determined
Solubility in water:		insoluble
Solubility in other solvents:		Not tested
Autoignition:	360 °C	(BAM)
Decomposition temperature:		Not tested

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 / Chinese hamster: > 1,500 mg/kg
* Note: Data based on component information.

LD50 / oral / rat: > 5,000 mg/kg
* Note: Data based on component information.

Acute inhalation toxicity:

Information on: Butanedioic acid, dimethyl ester, polymer with 4-hydroxy-2,2,6,6-tetramethyl-1-piperidineethanol (9CI)

LC50 / by inhalation / rat: > 1 ppm
in air for a 4-hour aerosol exposure with approximately 40% of particles <7 microns. There were no deaths or untoward behavioral alterations nor did necropsy reveal any gross pathologic alterations.

Information on: Poly[[6-[1,1,3,3-tetramethylbutyl)amino]-s-triazine-2,4-diyl][(2,2,6,6-tetramethyl-4-piperidyl)imino] hexamethylene[(2,2,6,6-tetrame
Exposure to the decomposition products produced by heating the productto 300 C elicited no mortalities with only transient symptoms noted.

Acute dermal toxicity:

LD50 / dermal / rat: > 2,000 mg/kg
* Note: Data based on component information.

Skin irritation:

Information on: Poly[[6-[1,1,3,3-tetramethylbutyl)amino]-s-triazine-2,4-diyl][(2,2,6,6-tetramethyl-4-piperidyl)imino] hexamethylene[(2,2,6,6-tetrame
(Rabbits) Not an irritant.

Information on: Butanedioic acid, dimethyl ester, polymer with 4-hydroxy-2,2,6,6-tetramethyl-1-piperidineethanol (9CI)
(Rabbits) Not an irritant.

Eye irritation:

Information on: Poly[[6-[1,1,3,3-tetramethylbutyl)amino]-s-triazine-2,4-diyl][(2,2,6,6-tetramethyl-4-piperidyl)imino] hexamethylene[(2,2,6,6-tetrame
(Rabbits) Not an irritant.

Information on: Butanedioic acid, dimethyl ester, polymer with 4-hydroxy-2,2,6,6-tetramethyl-1-piperidineethanol (9CI)
(Rabbits) Not an irritant.

Skin Sensitization:

Information on: Butanedioic acid, dimethyl ester, polymer with 4-hydroxy-2,2,6,6-tetramethyl-1-piperidineethanol (9CI)
(Guinea Pig) Not a sensitizer.

Information on: Poly[[6-[1,1,3,3-tetramethylbutyl)amino]-s-triazine-2,4-diyl][(2,2,6,6-tetramethyl-4-piperidyl)imino] hexamethylene[(2,2,6,6-tetrame
(Guinea pig) Maximization test: Not a sensitizer.

Subchronic Toxicty:

Information on: Butanedioic acid, dimethyl ester, polymer with 4-hydroxy-2,2,6,6-tetramethyl-1-piperidineethanol (9CI)
3 Month study (rats): The organ weights were all within the normal variations and there was no evidence of any dose-related effect. The only macro- and histopathological findings was a mammary adeno-carcinoma in the right inguinal region of a female treated with 50 mg/kg bw. The tumor was not regarded as treatment related. The NOEL was 450 mg/kg.

Subchronic Toxicty:

Information on: Poly[[6-[1,1,3,3-tetramethylbutyl)amino]-s-triazine-2,4-diyl][(2,2,6,6-tetramethyl-4-piperidyl)imino] hexamethylene[(2,2,6,6-tetrame
Feeding studies were conducted using the rat or dog for periods up to 6 months at dietary levels up to 10,000 ppm. Toxicity primarily involving the liver and mesenteric lymph node were evident in both species at the higher dosages. Spleen and blood changes were also seen. The rat NOEL was in the 5 -7 mg/kg/day range (100 ppm) with the dog NOEL being 19mg/kg/day (600 ppm).

Genetic toxicity:

Non-mutagenic (based on composition).

Information on: Poly[[6-[1,1,3,3-tetramethylbutyl)amino]-s-triazine-2,4-diyl][(2,2,6,6-tetramethyl-4-piperidyl)imino] hexamethylene[(2,2,6,6-tetrame

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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.

Information on: Poly[[6-[1,1,3,3-tetramethylbutyl)amino]-s-triazine-2,4-diyl][(2,2,6,6-tetramethyl-4-piperidyl)imino] hexamethylene[(2,2,6,6-tetrame

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Reproductive toxicity:

Information on: Poly[[6-[1,1,3,3-tetramethylbutyl)amino]-s-triazine-2,4-diyl][(2,2,6,6-tetramethyl-4-piperidyl)imino] hexamethylene[(2,2,6,6-tetrame
In a teratology study, pregnant rats were administered the product by gavage, from day 6 until day 15 of pregnancy, inclusive, at dosage of 0, 200, 600, and 1200 mg/kg. The dams of the higher dosage groups showed a dose-related reduction in body weight gain and food consumption. The progeny of the high-dose group displayed a delay of skeletal maturation, with calcanei and 5th sternebrae being affected. No other significant effects were seen. In a 2-generation reproduction study, rats were administered 400, 2000 and 4000 ppm in diet. No treatment-related effects were observed in the offspring at any dose level. However, toxic effects were observed at the 2000 and 4000 ppm dose levels in the parents of both generations, suggestive of an immuno-response (effects included reddened and/or swollen ears and/or extremities, enlarged lymph nodes, and/or findings in the kidneys, spleen and/or liver). The no observable effect level (NOEL) for effects on the offspring was 4000 ppm; the NOEL for maternal and paternal toxicity was 400 ppm.

Developmental toxicity/teratogenicity:

Information on: Poly[[6-[1,1,3,3-tetramethylbutyl)amino]-s-triazine-2,4-diyl][(2,2,6,6-tetramethyl-4-piperidyl)imino] hexamethylene[(2,2,6,6-tetrame
(Rats) Teratology Study. Oral dosage of 0, 200, 600, and 1200 mg/kg from day 6 until day 15 of pregnancy. The dams of the higher dosage groups showed a dose-related reduction in body weight gain and food consumption. The progeny of the high-dose group displayed a delay of skeletal maturation, with calcanei and 5th sternebrae being affected. No other significant effects were seen.
(Rats)
In a 2-generation reproduction study, rats were administered 400, 2000and 4000 ppm in diet. No treatment-related effects were observed in the offspring at any dose level. However, toxic effects were observed at the 2000 and 4000 ppm dose levels in the parents of both generations, suggestive of an immuno-response (effects included reddened and/or swollen ears and/or extremities, enlarged lymph nodes, and/or findings in the kidneys, spleen and/or liver). The no observable effect level (NOEL) for effects on the offspring was 4000 ppm; the NOEL for maternal and paternal toxicity was 400 ppm.

Metabolism:

Information on: Poly[[6-[1,1,3,3-tetramethylbutyl)amino]-s-triazine-2,4-diyl][(2,2,6,6-tetramethyl-4-piperidyl)imino] hexamethylene[(2,2,6,6-tetrame
Male rats were orally administered a single dose of either 15 or 200 mg/kg of radiolabelled test material. Blood/plasma levels showed non-linearity at these doses and had a long elimination half-life. Distribution was primarily to spleen, liver and gastrointestinal tract. Polar metabolites were formed. Excretion was almost exclusively via the feces with about 70% and 100% of the radioactivity recovered by 24 and 168 hours, respectively.

Metabolism:

Information on: Butanedioic acid, dimethyl ester, polymer with 4-hydroxy-2,2,6,6-tetramethyl-1-piperidineethanol (9CI)
(rat) An average of 58% was excreted within 24 hours. After 144 hours,almost all radioactivity was excreted. Residual readioactivity was found in the liver, testes, and ovaries. There is evidence that this product is first partially degraded in the intestinal tract. Thereafter, these degradation products are absorbed and further degraded.
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12. Ecological Information

Toxicity to fish:

Not tested

Toxicity to aquatic invertebrates:

Not tested

Toxicity to aquatic plants:

Not tested

Toxicity to microorganisms:

Not tested

Biodegradation:

Not tested

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.

15. Regulatory Information

Canada: Domestic Substances List (DSL):	All components either exempt or listed on the DSL
US: Toxic Substances Control Act (TSCA):	All component(s) comprising this product are either exempt or listed on the TSCA inventory

United States - Regulations

SARA Section 311/312 Hazard Communication Standard:

Acute Health:	Y	Fire:	N
Chronic Health:	Y	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 SOCMI Intermediate or Final VolatileOrganic 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:

WARNING: This product contains a chemical known to the State of California to cause cancer.

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

WARNING: This product contains a chemical known to the State of California to cause cancer.

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

END OF DATA SHEET