

# Safety Data Sheet

## Irganox® 1098

Revision date : 2016/01/13  
Version: 4.0

Page: 1/11  
(30097245/SDS\_GEN\_US/EN)

### 1. Identification

#### Product identifier used on the label

## Irganox® 1098

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

Recommended use\*: stabilizer; polyurethane component

Suitable for use in industrial sector: Polymers industry; chemical industry

\* 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

---

### 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:

# Safety Data Sheet

## Irganox® 1098

Revision date : 2016/01/13  
Version: 4.0

Page: 2/11  
(30097245/SDS\_GEN\_US/EN)

May form combustible dust concentration in air.

### Hazards not otherwise classified

The product is under certain conditions capable of dust explosion.

**According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200**

### Emergency overview

#### NOTICE:

May cause mechanical irritation to eyes, skin and respiratory system.

AVOID CREATING DUST.

Product may present a nuisance dust hazard.

Use NIOSH approved respirator as needed to mitigate exposure.

Take precautionary measures against static discharges.

---

## 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:

If difficulties occur after dust has been inhaled, remove to fresh air and 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.

# Safety Data Sheet

## Irganox® 1098

Revision date : 2016/01/13  
Version: 4.0

Page: 3/11  
(30097245/SDS\_GEN\_US/EN)

Further important symptoms and effects are so far not known.  
Hazards: No applicable information available.

### 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, 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.

---

# Safety Data Sheet

## Irganox® 1098

Revision date : 2016/01/13

Version: 4.0

Page: 4/11

(30097245/SDS\_GEN\_US/EN)

### 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.

#### **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.

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. When using, do not eat, drink or smoke. Hands and/or face

# Safety Data Sheet

## Irganox® 1098

Revision date : 2016/01/13

Version: 4.0

Page: 5/11

(30097245/SDS\_GEN\_US/EN)

should be washed before breaks and at the end of the shift. At the end of the shift the skin should be cleaned and skin-care agents applied.

### 9. Physical and Chemical Properties

Form:	powder	
Odour:	characteristic	
Odour threshold:	No applicable information available.	
Colour:	white	
pH value:	5.6 ( 10 g/l, 20 - 25 °C) (as suspension)	
Melting temperature:	156 - 161 °C	
Boiling point:	not applicable	
Sublimation point:	No applicable information available.	
Flash point:	282 °C	
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:	410 °C	(BAM)
Vapour pressure:	< 0.1 hPa ( 20 °C)	
Density:	1.04 g/cm <sup>3</sup> ( 20 °C)	
Relative density:	No applicable information available.	
Bulk density:	approx. 330 kg/m <sup>3</sup>	
Vapour density:	No applicable information available.	
Partitioning coefficient n- octanol/water (log Pow):	> 6 ( 20 - 25 °C)	
Self-ignition temperature:	410 °C	
Thermal decomposition:	> 350 °C Thermal decomposition above the indicated temperature is possible. No decomposition if stored and handled as prescribed/indicated.	
Viscosity, dynamic:	not determined	
Viscosity, kinematic:	No applicable information available.	
Particle size:	38 µm	(134001)
Solubility in water:	< 1 mg/l ( 20 °C)	
Solubility (quantitative):	No applicable information available.	
Solubility (qualitative):	No applicable information available.	
Molar mass:	636.96 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.

# Safety Data Sheet

## Irganox® 1098

Revision date : 2016/01/13  
Version: 4.0

Page: 6/11  
(30097245/SDS\_GEN\_US/EN)

Corrosion to metals:  
Corrosive effects to metal are not anticipated.

Oxidizing properties:  
Based on its structural properties the product is not classified as oxidizing.  
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  
Thermal decomposition above the indicated temperature is possible. No decomposition if stored and handled as prescribed/indicated.

---

## 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 after a single skin contact.

#### Oral

Type of value: LD50  
Species: rat (male/female)  
Value: > 7,750 mg/kg (similar to OECD guideline 401)  
No mortality was observed.

#### Inhalation

No data available.

#### Dermal

# Safety Data Sheet

## Irganox® 1098

Revision date : 2016/01/13  
Version: 4.0

Page: 7/11  
(30097245/SDS\_GEN\_US/EN)

Type of value: LD50  
Species: rabbit  
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  
Method: Draize test

### Sensitization

Assessment of sensitization: No sensitizing effect.

no data

Species: guinea pig  
Result: Non-sensitizing.  
Literature data.

### Aspiration Hazard

No aspiration hazard expected.

## **Chronic Toxicity/Effects**

### Repeated dose toxicity

Assessment of repeated dose toxicity: Repeated oral uptake of the substance did not cause substance-related effects.

### Genetic toxicity

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

### Carcinogenicity

Assessment of carcinogenicity: In long-term studies in rats in which the substance was given by feed, a carcinogenic effect was not observed.

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

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

### Teratogenicity

Assessment of teratogenicity: In animal studies the substance did not cause malformations.

## **Symptoms of Exposure**

# Safety Data Sheet

## Irganox® 1098

Revision date : 2016/01/13

Version: 4.0

Page: 8/11

(30097245/SDS\_GEN\_US/EN)

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:

There is a high probability that the product is not acutely harmful to aquatic organisms. No toxic effects occur within the range of solubility. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. Based on long-term (chronic) toxicity study data, the product is very likely not harmful to aquatic organisms.

#### Toxicity to fish

LC50 (96 h) > 100 mg/l, Brachydanio rerio (OECD 203; ISO 7346; 84/449/EEC, C.1, static)

The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested. Limit concentration test only (LIMIT test). No toxic effects occur within the range of solubility. The details of the toxic effect relate to the nominal concentration.

#### Aquatic invertebrates

EC50 (48 h) > 100 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

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

#### Aquatic plants

EC50 (72 h) 45 mg/l (biomass), Desmodesmus subspicatus (Guideline 92/69/EEC, C.3, static)

The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested. No toxic effects occur within the range of solubility. The details of the toxic effect relate to the nominal concentration.

No observed effect concentration (72 h) 11 mg/l (biomass), Desmodesmus subspicatus (Guideline 92/69/EEC, C.3, static)

The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested. No toxic effects occur within the range of solubility. The details of the toxic effect relate to the nominal concentration.

#### Assessment of terrestrial toxicity

No data available concerning terrestrial toxicity.

### 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). The details of the toxic effect relate to the nominal concentration.

OECD Guideline 209 aquatic

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

Limit concentration test only (LIMIT test). The details of the toxic effect relate to the nominal concentration.



# Safety Data Sheet

## Irganox® 1098

Revision date : 2016/01/13  
Version: 4.0

Page: 9/11  
(30097245/SDS\_GEN\_US/EN)

### Persistence and degradability

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

Not readily biodegradable (by OECD criteria). Poorly biodegradable.

#### Elimination information

5 % CO<sub>2</sub> formation relative to the theoretical value (28 d) (OECD 301B; ISO 9439; 92/69/EEC, C.4-C) (aerobic, activated sludge, domestic, non-adapted)

#### Assessment of stability in water

Study does not need to be conducted. Study technically not feasible.

#### Photodegradation

t<sub>1/2</sub> (Indirect photolysis) 1.84 h; OH radical (calculated)

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

### Bioaccumulative potential

#### Assessment bioaccumulation potential

Significant 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. 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

# Safety Data Sheet

## Irganox® 1098

Revision date : 2016/01/13  
Version: 4.0

Page: 10/11  
(30097245/SDS\_GEN\_US/EN)

### 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

**EPCRA 311/312 (Hazard categories):** Fire (Combustible Dust);

#### NFPA Hazard codes:

Health : 1 Fire: 2 Reactivity: 0 Special:

#### HMIS III rating

Health: 1 Flammability: 2 Physical hazard:0

---

## 16. Other Information

### SDS Prepared by:

BASF NA Product Regulations  
SDS Prepared on: 2016/01/13

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

---

Irganox® 1098 is a registered trademark of BASF Corporation or BASF SE  
IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE , IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU MAKE TESTS TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA, AND INFORMATION FURNISHED BY OUR COMPANY HEREUNDER ARE GIVEN GRATIS AND WE ASSUME NO

# Safety Data Sheet

## Irganox® 1098

Revision date : 2016/01/13

Page: 11/11

Version: 4.0

(30097245/SDS\_GEN\_US/EN)

---

OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION  
GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.  
END OF DATA SHEET