

Safety Data Sheet

Irganox® 5057

Revision date : 2016/08/16

Version: 3.0

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(30241583/SDS_GEN_US/EN)

1. Identification

Product identifier used on the label

Irganox® 5057

Recommended use of the chemical and restriction on use

Unsuitable for use: This material is not intended for use in products for which prolonged contact with mucous membranes, body fluids or abraded skin, or implantation within the human body, is specifically intended, unless the finished product has been tested in accordance with nationally and internationally applicable safety testing requirements. Because of the wide range of such potential uses, we are not able to recommend this material as safe and effective for such uses and assume no liability for such uses.

Recommended use*: antioxidant

* 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: Benzenamine,N-phenyl-,reaction products with 2,4,4-trimethylpentene

2. Hazards Identification

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

Classification of the product

Aquatic Acute

3

Hazardous to the aquatic environment - acute

Label elements

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Hazard Statement:

H402 Harmful to aquatic life.

Precautionary Statements (Prevention):

P273 Avoid release to the environment.

Precautionary Statements (Disposal):

P501 Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

3. Composition / Information on Ingredients

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

<u>CAS Number</u>	<u>Weight %</u>	<u>Chemical name</u>
68411-46-1	100.0 %	Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene

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:

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.

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Further important symptoms and effects are so far not known.

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:
water spray, dry powder, 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:
Wear a self-contained breathing apparatus.

Further information:

The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Use personal protective clothing. Keep people away and stay on the upwind side. Breathing protection required.

Environmental precautions

Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

For large amounts: Pump off product.
For residues: Pick up with suitable absorbent material. Dispose of absorbed material in accordance with regulations.

7. Handling and Storage

Precautions for safe handling

No special measures necessary provided product is used correctly.

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Protection against fire and explosion:

No special precautions necessary.

Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place. sensitive to cold To reliquify heat contents to 35°C (95°F)

Storage stability:

Storage temperature: > 10 °C

Protect from temperatures below: 10 °C

8. Exposure Controls/Personal Protection

No occupational exposure limits known.

Personal protective equipment

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator.

Hand protection:

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:	liquid	
Odour:	odourless	
Odour threshold:	No applicable information available.	
Colour:	yellow	
pH value:	5.1 - 6.2 (1 %(m), 20 - 25 °C) (as suspension)	
glass transition temperature:	-31 °C	(OECD Guideline 102)
Boiling point:	> 300 °C (989 mbar)	(OECD Guideline 103)
Sublimation point:	No applicable information available.	
Flash point:	154 °C	(ASTM D93)
Flammability:	not flammable	

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Lower explosion limit:	For liquids not relevant for classification and labelling. The lower explosion point may be 5 - 15 °C below the flash point.	
Upper explosion limit:	For liquids not relevant for classification and labelling.	
Autoignition:	490 °C	(DIN 51794)
Vapour pressure:	< 1 Pa (25 °C)	
Density:	0.97 g/cm3 (20 °C)	(OECD Guideline 109)
Vapour density:	No applicable information available.	
Partitioning coefficient n-octanol/water (log Pow):	> 5 (25 °C)	(calculated)
Self-ignition temperature:	Based on its structural properties the product is not classified as self-igniting.	
Thermal decomposition:	> 350 °C	
Viscosity, kinematic:	352.7 mm2/s (40 °C)	(Capillary viscometer)
Particle size:	not applicable	
% volatiles:	negligible	
Solubility in water:	2 mg/l (20 °C)	
Solubility (quantitative):	No applicable information available.	
Solubility (qualitative):	No applicable information available.	
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.	
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:

Corrosive effects to metal are not anticipated.

Formation of

Remarks:

flammable gases:

Forms no flammable gases in the presence of water.

Chemical stability

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

Peroxides:

0 %

The product does not contain peroxides.

Possibility of hazardous reactions

No hazardous reactions when stored and handled according to instructions.

The product is chemically stable.

Conditions to avoid

No special precautions other than good housekeeping of chemicals.

Incompatible materials

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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: No known acute effects.

Oral

Type of value: LD50

Species: rat

Value: > 5,000 mg/kg (OECD Guideline 401)

Inhalation

No data available.

Dermal

Type of value: LD50

Species: rat

Value: > 2,000 mg/kg (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. Not irritating to the eyes.

Skin

Species: rabbit

Result: non-irritant

Method: OECD Guideline 404

Eye

Species: rabbit

Result: non-irritant

Method: OECD Guideline 405

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Sensitization

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

other

Species: guinea pig

Result: Non-sensitizing.

Method: OECD Guideline 406

Buehler test

Species: guinea pig

Result: Non-sensitizing.

Method: OECD Guideline 406

Aspiration Hazard

No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: The substance may cause damage to the liver after repeated ingestion of high doses, as shown in animal studies.

Genetic toxicity

Assessment of mutagenicity: The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture. The substance was not genotoxic in mammalian cell culture. The substance was not genotoxic in a test with mammals. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

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.

Based on the ingredients there is no suspicion of a carcinogenic effect in humans.

Reproductive toxicity

Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect. The results were determined in a Screening test (OECD 421/422).

Teratogenicity

Assessment of teratogenicity: The substance did not cause malformations in animal studies; however, toxicity to development was observed at high doses that were toxic to the parental animals. The results were determined in a Screening test (OECD 421/422).

Symptoms of Exposure

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:

Acutely harmful for aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

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Toxicity to fish

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

The details of the toxic effect relate to the nominal concentration. The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested.

Aquatic invertebrates

EC50 (48 h) 51 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

The details of the toxic effect relate to the nominal concentration. The product has low solubility in the test medium. A saturated solution has been tested.

Aquatic plants

EC50 (72 h) > 100 mg/l (growth rate), Desmodemus subspicatus (OECD Guideline 201, static)

The details of the toxic effect relate to the nominal concentration. The product has low solubility in the test medium. A saturated solution has been tested.

No observed effect concentration (72 h) \geq 10 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)

The details of the toxic effect relate to the nominal concentration. The product has low solubility in the test medium. A saturated solution has been tested.

Chronic toxicity to fish

Study not necessary due to exposure considerations.

Chronic toxicity to aquatic invertebrates

EC10 (21 d) 1.69 mg/l, Daphnia magna (OECD Guideline 211, semistatic)

The product has low solubility in the test medium. A saturated solution has been tested. The details of the toxic effect relate to the nominal concentration.

Assessment of terrestrial toxicity

Toxic effects have been observed in studies with terrestrial plants.

Soil living organisms

Toxicity to soil dwelling organisms:

EC10 (56 d) 259 mg/kg, Eisenia foetida (OECD Guideline 222, artificial soil)

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

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

OECD Guideline 209 aquatic

activated sludge/EC20 (3 h): approx. 100 mg/l

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

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

1 % CO₂ 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 technically not feasible.

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Bioaccumulative potential

Assessment bioaccumulation potential

The product contains components with potential for bioaccumulation

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.

13. Disposal considerations

Waste disposal of substance:

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

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

VOC content:

negligible

Federal Regulations

Registration status:

Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories):

Not hazardous;

NFPA Hazard codes:

Health : 1 Fire: 0 Reactivity: 0 Special:

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HMIS III rating

Health: 1 Flammability: 0 Physical hazard: 0

16. Other Information

SDS Prepared by:

BASF NA Product Regulations

SDS Prepared on: 2016/08/16

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