Safety Data Sheet
Irganox® 1010
Revision date: 2011/01/19
Version: 1.2

1. Product and Company Identification

Use: Antioxidant / Stabilizer

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

2. Hazards Identification

Emergency overview

NOTICE:
May cause mechanical irritation to eyes, skin and respiratory system.
AVOID CREATING DUST.
Take precautionary measures against static discharges.
Use NIOSH approved respirator as needed to mitigate exposure.

State of matter: solid
Colour: white to off-white
Odour: odourless

Potential health effects

Primary routes of exposure:
Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquified gases.

Acute toxicity:
Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact.

Irritation / corrosion:
Not irritating to eyes and skin.

Sensitization:
Skin sensitizing effects were not observed in animal studies.

Chronic toxicity:

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. No carcinogenic effects reported.
Repeated dose toxicity: No adverse effects were observed after repeated oral exposure in animal studies.

Reproductive toxicity: No reproductive toxic effects reported.

Teratogenicity: No teratogenic effects reported.

Genotoxicity: The substance was not mutagenic in bacteria. The substance was not mutagenic in a test with mammals.

Signs and symptoms of overexposure:
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.

Potential environmental effects

Aquatic toxicity:
No toxic effects occur within the range of solubility.

Degradation / environmental fate:
The product is virtually insoluble in water and can thus be separated from water mechanically in suitable effluent treatment plants.

3. Composition / Information on Ingredients

This product is not regarded as hazardous under current OSHA Hazard Communication standard; CFR 29 Part 1910.1200.

4. First-Aid Measures

General advice:
Remove contaminated clothing.

If inhaled:
Keep patient calm, remove to fresh air, seek medical attention. Assist in breathing if necessary.

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.

Seek medical attention.

If swallowed:
Rinse mouth and then drink plenty of water. Do not induce vomiting. Immediate medical attention required.

Note to physician
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Flash point: 297 °C (DIN 51584)
Autoignition: 410 °C (BAM)
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Flammability: does not ignite
Self-ignition temperature: > 350 °C

Suitable extinguishing media:
dry powder, carbon dioxide, alcohol-resistant foam

Unsuitable extinguishing media for safety reasons:
water jet

Hazards during fire-fighting:
harmful vapours
Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

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

Personal precautions:
Avoid dust formation. Use personal protective clothing.

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

Cleanup:
Avoid raising dust.
For small amounts: Pick up with suitable appliance and dispose of.
For large amounts: Contain with dust binding material and dispose of.

7. Handling and Storage

Handling
General advice:
Closed containers should only be opened in well-ventilated areas.

Protection against fire and explosion:
Avoid dust formation. Take precautionary measures against static discharges.

Storage
General advice:
Keep container tightly closed and dry; store in a cool place.

Storage stability:
Storage temperature: 0 - 40 °C

8. Exposure Controls and Personal Protection

Personal protective equipment
Respiratory protection:
Wear a NIOSH-certified (or equivalent) particulate respirator.
Hand protection: Chemical resistant protective gloves

Eye protection: Safety glasses with side-shields.

General safety and hygiene measures: Wear protective clothing as necessary to minimize contact. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>powder</td>
</tr>
<tr>
<td>Odour</td>
<td>odourless</td>
</tr>
<tr>
<td>Colour</td>
<td>white to off-white</td>
</tr>
<tr>
<td>pH value</td>
<td>5.9 (1 % (m), 20 - 25 °C) (as suspension)</td>
</tr>
<tr>
<td>Melting range</td>
<td>110 - 125 °C</td>
</tr>
<tr>
<td>Partitioning coefficient n-octanol/water (log Pow)</td>
<td>23 (OECD Guideline 107)</td>
</tr>
<tr>
<td>% volatiles</td>
<td>0.5 %</td>
</tr>
</tbody>
</table>

10. Stability and Reactivity

Dust explosion class: Dust explosion class 2 (Kst-value 200 up to 300 bar m s⁻¹) (St 2)

Conditions to avoid: Avoid electro-static discharge.

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

Hazardous reactions: No hazardous reactions known. Stable under normal conditions.

Decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Corrosion to metals: No corrosive effect on metal.

11. Toxicological information

Acute toxicity

Oral:
Type of value: LD50
Species: rat
Value: > 5,000 mg/kg

Inhalation:
Type of value: LC0
Species: rat
Value: > 46 mg/l
Exposure time: 1 h

Dermal:
Type of value: LD50
Species: rat  
Value: > 2,000 mg/kg

Irritation / corrosion

Skin:  
Species: rabbit  
Result: non-irritant

Eye:  
Species: rabbit  
Result: non-irritant

Sensitization:  
Species: guinea pig  
No sensitizing effect.  
Patch-Test  
Species: human  
Result: Non-sensitizing.

Genetic toxicity

Experimental/calculated data:  
Ames-test Salmonella typhimurium:with and without metabolic activation negative

12. Ecological Information

Fish

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

Aquatic invertebrates

Acute:  
OECD Guideline 202, part 1 Daphnia magna/EC50 (24 h): > 86 mg/l  
Tested above maximum solubility.

Aquatic plants

Toxicity to aquatic plants:  
Guideline 92/69/EEC, C.3 Algae/EC50 (72 h): > 100 mg/l

Microorganisms

Toxicity to microorganisms:  
OECD Guideline 209 activated sludge/EC50 (3 h): > 100 mg/l

Degradability / Persistence

Biological / Abiological Degradation

Test method: OECD 303A; ISO 11733; 92/69 EEC, V, C.10  
Degree of elimination: 45 % (28 d)

Test method: OECD 301B; ISO 9439; 92/69/EEC, C.4-C  
Degree of elimination: 5 % (28 d)  
Evaluation: Moderately/partially eliminated from water. Not readily biodegradable.

Bioaccumulation

OECD Guideline 305 C  
Bioconcentration factor < 2.3
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

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
Cosmetic TSCA, US released / exempt

OSHA hazard category:
This material is classified as not hazardous under OSHA regulations.

EPCRA 311/312 (Hazard categories):
Not hazardous;

16. Other Information

NFPA Hazard codes:
Health: 1 Fire: 1 Reactivity: 0 Special:

HMIS III rating
Health: 1 Flammability: 1 Physical hazard: 0

NFPA and HMIS use a numbering scale ranging from 0 to 4 to indicate the degree of hazard. A value of zero means that the substance possesses essentially no hazard; a rating of four indicates extreme danger. Although similar, the two rating systems are intended for different purposes, and use different criteria. The NFPA system was developed to provide an
on-the-spot alert to the hazards of a material, and their severity, to emergency responders. The HMIS system was designed to communicate workplace hazard information to employees who handle hazardous chemicals.

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MSDS Prepared by:
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MSDS Prepared on: 2011/01/19

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