We create chemistry

Safety Data Sheet
Irganox® 1135

1. Identification

Product identifier used on the label

Irganox® 1135

Recommended use of the chemical and restriction on use

Recommended use*: Antioxidant / Stabilizer; Antioxidant for Lubricants; additives for fuels and lubricants; additive for the petroleum 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 Canada Inc.
100 Milverton Drive
Mississauga, ON L5R 4H1, CANADA

Telephone: +1 289 360-1300

Emergency telephone number

CANUTEC (reverse charges): (613) 996-6666
BASF HOTLINE: (800) 454-COPE (2673)

Other means of identification

Chemical family: preparation

2. Hazards Identification

According to Hazardous Products Regulations (HPR) (SOR/2015-17)

Classification of the product

No need for classification according to GHS criteria for this product.

Label elements

The product does not require a hazard warning label in accordance with GHS criteria.

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 Hazardous Products Regulations (HPR) (SOR/2015-17)

CAS Number	Weight %	Chemical name
6386-38-5	3.0 - 7.0%	Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, methyl ester

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:
If swallowed, drink plenty of water. Do not induce vomiting. Consult a physician.

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.
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.

Impact Sensitivity:
Assessment: no

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.

Protection against fire and explosion:
No special precautions necessary.

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

Does not contain components with substance specific occupational exposure limits.

No occupational exposure limits known.

Advice on system design:
No applicable information available.

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:	mild	
Odour threshold:	No applicable information available.	
Colour:	yellow to brown	
pH value:	6.5 (1 %(m), 20 - 25 °C) (as suspension)	
Melting point:	< -30 °C	(Directive 92/69/EEC, A.1)
Boiling point:	240 °C (1,027 hPa)	
Sublimation point:	No applicable information available.	
Flash point:	176 °C	(DIN EN 22719; ISO 2719)
Flammability:	not flammable	
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:	380 °C	
Vapour pressure:	0.0015 Pa (25 °C)	(OECD Guideline 104)

Density:	0.95 - 0.99 g/cm3 (20 °C) 0.92 g/cm3 (80 °C) 0.905 g/cm3 (100 °C)	(Directive 92/69/EEC, A.3)
Relative density:	0.9674 (20 °C)	(Directive 84/449/EEC, A.3)
Partitioning coefficient n-octanol/water (log Pow):	9.2 (20 °C)	
Self-ignition temperature:	365 °C	(Directive 84/449/EEC, A.15)
Viscosity, dynamic:	620 - 650 mPa.s (20 °C) 110 - 115 mPa.s (40 °C)	
Viscosity, kinematic:	95 - 150 mm2/s (40 °C)	
Particle size:	The substance / product is marketed or used in a non solid or granular form.	
% volatiles:	negligible	
Solubility in water:	0.5 µg/l (20 °C)	
Solubility (qualitative):	No applicable information available.	
Molar mass:	390.6 g/mol	
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:
No data available.

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
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

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.

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

Oral
Type of value: LD50
Species: rat
Value: > 2,000 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 eyes and skin.

Skin
Species: rabbit
Result: non-irritant
Method: OECD Guideline 404

Eye
Species: rabbit
Result: non-irritant
Method: OECD Guideline 405

Sensitization
Assessment of sensitization: No sensitizing effect.

other
Species: guinea pig
Result: Non-sensitizing.

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 even after repeated ingestion of low doses, as shown in animal studies. Due to the species specific mode of action, the effects are not expected to occur in humans.
Based on available Data, the classification criteria are not met.

Genetic toxicity
Assessment of mutagenicity: The substance was not mutagenic in bacteria. The substance was not genotoxic in mammalian cell culture. The substance was not genotoxic in a test with mammals.

Carcinogenicity
Assessment of carcinogenicity: In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Reproductive toxicity
Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect.

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.

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:
There is a high probability that the product is not acutely harmful to aquatic organisms. Based on long-term (chronic) toxicity study data, the product is very likely not 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.

Toxicity to fish
LC50 (96 h) > 74 mg/l, Brachydanio rerio (OECD Guideline 203)
Tested above maximum solubility. No toxic effects occur within the range of solubility.

Aquatic invertebrates
EC50 (24 h) > 100 mg/l, Daphnia magna (OECD Guideline 202, part 1)

Aquatic plants
EC50 (72 h) > 3 mg/l, Scenedesmus sp. (OECD Guideline 201)
Tested above maximum solubility. No toxic effects occur within the range of solubility.

Chronic toxicity to aquatic invertebrates
No observed effect concentration (21 d) >= 1mg/L, Daphnia magna (OECD Guideline 202, part 2, semistatic)
The product has low solubility in the test medium. A saturated solution has been tested. The value meets the highest applied test concentration. No toxic effects occur within the range of solubility.

Assessment of terrestrial toxicity
Toxic effects have been observed in studies with soil living organisms.

Soil living organisms

Toxicity to soil dwelling organisms:
No observed effect concentration (56 d) 250 mg/kg, Eisenia foetida (OECD Guideline 222, artificial soil)

No observed effect concentration (28 d) 31.6 mg/kg, soil dwelling microorganisms (OECD 217)

EC50 (14 d) > 1,000 mg/kg, Eisenia foetida (OECD Guideline 207, artificial soil)

Toxicity to terrestrial plants

EC50 (19 d) > 100 mg/kg, Brassica rapa (OECD Guideline 208)

Microorganisms/Effect on activated sludge

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

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

(OECD 301B; ISO 9439; 92/69/EEC, C.4-C) Non-biodegradable.

Assessment of stability in water
In contact with water the substance will hydrolyse slowly.

Information on Stability in Water (Hydrolysis)
$t_{1/2}$ 5 a (25 °C), (calculated, pH 7)
In contact with water the substance will hydrolyse slowly.

Bioaccumulative potential

Assessment bioaccumulation potential
Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is possible.

Bioaccumulation potential
Bioconcentration factor: 260 (35 d), Oncorhynchus mykiss (OECD-Guideline 305)

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. Do not discharge into drains/surface waters/groundwater.

Container disposal:
Uncontaminated packaging can be re-used. Packs that cannot be cleaned should be disposed of in the same manner as the contents.

14. Transport Information

Land transport
TDG

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	DSL, CA	released / listed

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2016/11/08

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.

END OF DATA SHEET