

Safety Data Sheet

Irgacure® 500

Revision date : 2015/09/02

Version: 4.0

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(30472120/SDS_GEN_US/EN)

1. Identification

Product identifier used on the label

Irgacure® 500

Recommended use of the chemical and restriction on use

Recommended use*: photoinitiator

* 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

Chemical family: mixture

2. Hazards Identification

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

Classification of the product

Carc.	2	Carcinogenicity
STOT RE	2	Specific target organ toxicity — repeated exposure
Aquatic Acute	2	Hazardous to the aquatic environment - acute
Aquatic Chronic	3	Hazardous to the aquatic environment - chronic

Label elements

Pictogram:

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Signal Word:
Warning

Hazard Statement:

H351	Suspected of causing cancer.
H373	May cause damage to organs (Kidney, Liver) through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.
H401	Toxic to aquatic life.

Precautionary Statements (Prevention):

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P201	Obtain special instructions before use.
P273	Avoid release to the environment.
P260	Do not breathe dust/gas/mist/vapours.
P202	Do not handle until all safety precautions have been read and understood.

Precautionary Statements (Response):

P314	Get medical advice/attention if you feel unwell.
P308 + P311	IF exposed or concerned: Call a POISON CENTER or doctor/physician.

Precautionary Statements (Storage):

P405	Store locked up.
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Precautionary Statements (Disposal):

P501	Dispose of contents/container to hazardous or special waste collection point.
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Hazards not otherwise classified

No specific dangers known, if the regulations/notes for storage and handling are considered.

Labeling of special preparations (GHS):

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 49 - 50 % Inhalation - vapour

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

Emergency overview

CAUTION:

Prolonged exposure may cause irritation of skin, eyes and mucous membranes.

Inhalation of vapours or aerosols may cause respiratory tract irritation.

High concentrations can have a narcotic effect.

May cause CNS depression.

Contains an IARC Group 2B carcinogen - possibly carcinogenic to humans.

May cause liver and kidney damage.

The statements are based on the properties of the individual components.

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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>
947-19-3	30.0 - 70.0%	Methanone, (1-hydroxycyclohexyl)phenyl-
119-61-9	30.0 - 70.0%	benzophenone

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

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119-61-9	30.0 - 70.0%	benzophenone

4. First-Aid Measures

Description of first aid measures

General advice:

Immediately remove contaminated clothing.

If inhaled:

If difficulties occur after vapour/aerosol has been inhaled, remove to fresh air and seek medical attention.

If on skin:

Wash affected areas thoroughly with soap and water. 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. Seek medical attention if necessary.

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

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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:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

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.

Environmental precautions

Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

Spills should be contained, solidified, and placed in suitable containers for disposal.

7. Handling and Storage

Precautions for safe handling

Keep away from sources of ignition - No smoking.

Protection against fire and explosion:

Take precautionary measures against static discharges.

Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds.

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place. Protect from direct sunlight.

Storage stability:

Storage temperature: > 18 °C

The solids can precipitate below the mentioned temperature, but the liquid can easily be reconstituted by heating above the mentioned temperature.

Protect from temperatures below: 18 °C

Characteristics of the product are reversibly changed when falling below the limit temperature.

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8. Exposure Controls/Personal Protection

Personal protective equipment

Respiratory protection:

Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator.

Hand protection:

Chemical resistant protective gloves

Eye protection:

Safety glasses with side-shields. Wear face shield if splashing hazard exists.

Body protection:

Impermeable protective clothing

General safety and hygiene measures:

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Form:	liquid
Odour:	characteristic
Odour threshold:	Not determined due to potential health hazard by inhalation.
Colour:	light yellow
pH value:	not determined
crystal separation:	< 18 °C
Boiling point:	> 300 °C
Flash point:	160 °C (DIN 51584)
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:	not determined
Vapour pressure:	0.047 Pa (20 °C)
Density:	approx. 1.1 g/cm ³ (20 °C)
Relative density:	approx. 1.1 (20 °C)
Vapour density:	not determined
Partitioning coefficient n-octanol/water (log Pow):	not applicable for mixtures
Self-ignition temperature:	not self-igniting
Thermal decomposition:	> 300 °C
Viscosity, dynamic:	90 mPa.s (20 °C)
% volatiles:	not determined
Solubility in water:	< 0.01 g/l (20 °C)
Miscibility with water:	immiscible
Evaporation rate:	not determined

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10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Oxidizing properties:
not fire-propagating

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

See MSDS section 7 - Handling and storage. Avoid electro-static discharge. Avoid light.

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.

Decomposes on UV-radiation.

Thermal decomposition:
> 300 °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.

Primary routes of entry

Inhalation.

Eyes

Skin

Ingestion.

Acute Toxicity/Effects

Inhalation

Type of value: LC50

Species: rat

Exposure time: 4 h

not determined

Dermal

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Type of value: LD50

Species: rat

Value: > 5,000 mg/kg

The statements are based on the properties of the individual components.

Irritation / corrosion

Assessment of irritating effects: Prolonged exposure to the product can result in irritation of the skin and mucous membranes.

Sensitization

Assessment of sensitization: Skin sensitizing effects were not observed in animal studies. The product has not been tested. The statement has been derived from the properties of the individual components.

Aspiration Hazard

No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: Repeated exposure may affect certain organs. Damages the kidneys. Damages the liver. The product has not been tested. The statement has been derived from the properties of the individual components.

Genetic toxicity

Assessment of mutagenicity: The substance was not mutagenic in bacteria. The substance was not mutagenic in a test with mammals. The substance was not mutagenic in mammalian cell culture. The product has not been tested. The statement has been derived from the properties of the individual components.

Carcinogenicity

Assessment of carcinogenicity: Contains a compound classified as IARC Group 2B (possibly carcinogenic to humans).

Information on: benzophenone

Assessment of carcinogenicity: IARC (International Agency for Research on Cancer) has classified this substance as group 2B (The agent is possibly carcinogenic to humans).

Reproductive toxicity

Assessment of reproduction toxicity: No data available.

Teratogenicity

Assessment of teratogenicity: No data available.

Other Information

Solvent vapours have a narcotic effect if inhaled in high concentrations. May cause central nervous system depression with symptoms of headache, nausea, vomiting and dizziness.

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.

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12. Ecological Information

Toxicity

Toxicity to fish

LC50 (96 h) > 10 - 100 mg/l, Fish

The product has not been tested. The statement has been derived from the properties of the individual components.

Aquatic invertebrates

EC50 (48 h) >10 - 100, daphnia

The product has not been tested. The statement has been derived from the properties of the individual components.

Aquatic plants

EC50 (72 h) > 1 - 10 mg/l (growth rate), algae

The product has not been tested. The statement has been derived from the properties of the individual components.

Chronic toxicity to fish

No data available.

Chronic toxicity to aquatic invertebrates

No observed effect concentration (21 d) > 0.1 - 1 mg/l, Daphnia magna (OECD Guideline 211)

The product has not been tested. The statement has been derived from the properties of the individual components.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

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

The product has not been tested. The statement has been derived from the properties of the individual components.

Bioaccumulative potential

Assessment bioaccumulation potential

Does not significantly accumulate in organisms.

Mobility in soil

Assessment transport between environmental compartments

No data available.

Additional information

Add. remarks environm. fate & pathway:

Treatment in biological waste water treatment plants has to be performed according to local and administrative regulations.

Other ecotoxicological advice:

The product has not been tested. The statements on ecotoxicology have been derived from the properties of the individual components.

Do not discharge product into the environment without control.

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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:

Recommend crushing, puncturing or other means to prevent unauthorized use of used containers. 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:

not determined

Federal Regulations

Registration status:

Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories):

Acute; Chronic

CA Prop. 65:

WARNING: THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

NFPA Hazard codes:

Health : 2 Fire: 1 Reactivity: 0 Special:

HMIS III rating

Health: 2 Flammability: 1 Physical hazard: 0

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16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2015/09/02

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.

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