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1. Identification

Product identifier used on the label

Plurafac® S 405 LF

Recommended use of the chemical and restriction on use

Recommended use*: Chemical

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: LINEAR ALCOHOL ALKOXYLATE

2. Hazards Identification

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

Classification of the product

Eye Dam./Irrit. 2A Serious eye damage/eye irritation

Aquatic Acute 2 Hazardous to the aquatic environment - acute

Label elements

Pictogram:

^{*} 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.

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Signal Word: Warning

Hazard Statement:

H319 Causes serious eye irritation.

H401 Toxic to aquatic life.

Precautionary Statements (Prevention):

P280 Wear eye/face protection.
P273 Avoid release to the environment.

P264 Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

P337 + P311 If eye irritation persists: Call a POISON CENTER or doctor/physician.

Precautionary Statements (Disposal):

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

point.

Hazards not otherwise classified

Labeling of special preparations (GHS):

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 100 % Inhalation - vapour

3. Composition / Information on Ingredients

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

CAS Number Weight % Chemical name

 $\overline{68987-81-5}$ >= $75.0 - \langle = 100.0\%$ Alcohols, C6-10, ethoxylated propoxylated

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 in eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

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If swallowed:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

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.

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 in confined areas or when exposed to combustion products.

Further information:

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. Information regarding personal protective measures see, section 8.

Environmental precautions

Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

For small amounts: Pick up with absorbent material (e.g. sand, sawdust, general-purpose binder).

Dispose of absorbed material in accordance with regulations.

For large amounts: Pump off product.

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

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7. Handling and Storage

Precautions for safe handling

Keep container tightly closed. Protect from the effects of light.

Protection against fire and explosion:

No special precautions necessary.

Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Keep in a cool place.

8. Exposure Controls/Personal Protection

No occupational exposure limits known.

Advice on system design:

Provide local exhaust ventilation to control vapours/mists.

Personal protective equipment

Respiratory protection:

Respiratory protection in case of vapour/aerosol release. Particle filter with medium efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P2 or FFP2)

Hand protection:

Chemical resistant protective gloves

Eye protection:

tight-fitting protective goggles with face screen

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. Keep away from food, drink and animal feeding stuffs. Avoid contact with skin and eyes. Remove contaminated clothing.

9. Physical and Chemical Properties

Form: liquid
Odour: of polyol
Odour threshold: not determined
Colour: colourless to yellow

pH value: 5.5 - 7 freezing range: 0 - 8 °C (1,013 hPa) Boiling point: not applicable

Sublimation point: No applicable information available.

Flash point: 224 - 227 °C (ASTM D92)

Flammability: No applicable information available.

Lower explosion limit: not determined

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(calculated)

Upper explosion limit: not determined Autoignition: not determined Vapour pressure: < 0.35 mmHg

(20°C)

Density: 0.99 - 1.04 g/cm3

(25°C)

Relative density: 0.99 - 1.04

(25°C)

Vapour density: No applicable information available.

Partitioning coefficient n-3.01

octanol/water (log Pow):

Self-ignition not self-igniting

temperature:

Thermal decomposition: 400 - 425 °F

204 - 219 °C

Viscosity, dynamic: 80 mPa.s (25°C)

Viscosity, kinematic: No applicable information available. Particle size: The substance / product is marketed

or used in a non solid or granular

form.

Solubility in water: soluble

Solubility (quantitative): No applicable information available. Solubility (qualitative): No applicable information available. Evaporation rate: No applicable information available.

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 corrosive effect on metal.

Oxidizing properties: not fire-propagating

Chemical stability

No applicable information available.

Possibility of hazardous reactions

The product is chemically stable.

Conditions to avoid

No conditions known that should be avoided.

Incompatible materials

strong oxidizing agents

Hazardous decomposition products

Decomposition products:

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

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Thermal decomposition:

400 - 425 °F

204 - 219 °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: Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Oral

Type of value: LD50

Species: rat

Value: > 2,000 mg/kg

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

<u>Inhalation</u>

Type of value: LC50

Species: rat

Value: approx. > 50 mg/l Exposure time: 4 h

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

Dermal

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

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

Assessment other acute effects

not applicable

Irritation / corrosion

Assessment of irritating effects: Moderately irritating to the eyes. Not irritating to the skin. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

<u>Skin</u>

Species: rabbit Result: non-irritant

Method: Primary skin irritation test

<u>Eye</u>

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Species: rabbit

Result: moderately irritating

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

Sensitization

Assessment of sensitization: not determined

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

Aspiration Hazard

No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: No applicable information available.

Experimental/calculated data: No effects observed

Genetic toxicity

Assessment of mutagenicity: The data available on mutagenic action are not consistent.

Genetic toxicity in vitro: Ames-test positive

HGPRT assay negative

No mutagenic effects reported.

Carcinogenicity

Experimental/calculated data: Not listed as a carcinogen by OSHA, IARC, & NTP.

Reproductive toxicity

Assessment of reproduction toxicity: No applicable information available.

Reproduction

Experimental/calculated data: The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

12. Ecological Information

Toxicity

Toxicity to fish

LC50 (96 h) 1 - 10 mg/l, Pimephales promelas

Aquatic invertebrates

EC50 (48 h) 1 - 10 mg/l

Aquatic plants

EC50 (120 h) 1 - 10 mg/l

Microorganisms/Effect on activated sludge

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Toxicity to microorganisms

Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.

Persistence and degradability

Elimination information

> 60 % CO2 formation relative to the theoretical value (28 d) (OECD 301B; ISO 9439; 92/69/EEC, C.4-C) Readily biodegradable.

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 possible.

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 products of a similar structure and composition.

13. Disposal considerations

Waste disposal of substance:

Dispose of in accordance with national, state and local regulations. It is the waste generator's responsibility to determine if a particular waste is hazardous under RCRA.

Container disposal:

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

RCRA: NA

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

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15. Regulatory Information

Federal Regulations

Registration status:

Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

CERCLA RQ CAS Number Chemical name

100 LBS 123-91-1; 75-56-9 1,4-dioxane; Propylene oxide

10 LBS 75-21-8 Ethylene Oxide

Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:

WARNING: This product can expose you to chemicals including ETHYLENE OXIDE, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

NFPA Hazard codes:

Health: 2 Fire: 1 Reactivity: 0 Special:

HMIS III rating

Health: 2 Flammability: 1 Physical hazard:0

16. Other Information

SDS Prepared by:

BASF NA Product Regulations SDS Prepared on: 2018/03/26

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