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1. Identification

Product identifier used on the label

Kolliphor® P 407 micro

Recommended use of the chemical and restriction on use

Recommended use*: pharmaceutical excipient

* 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

<u>Company:</u> 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: Oxirane, methyl-, polymer with oxirane

2. Hazards Identification

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

Classification of the product

Combustible Dust Combustible Dust (1) Combustible Dust

Label elements

Signal Word: Warning

Hazard Statement:

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May form combustible dust concentration in air.

Hazards not otherwise classified

Avoid dust development and deposition - dust explosion risk. Take precautionary measures against static discharges.

3. Composition / Information on Ingredients

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

Under the referenced regulation, this product does not contain any components classified for health hazards above the relevant cut off value.

4. First-Aid Measures

Description of first aid measures

General advice: Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air.

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 200-300 ml of water. Do not induce vomiting. Immediate medical attention required.

Most important symptoms and effects, both acute and delayed

Symptoms: No data available.

Indication of any immediate medical attention and special treatment needed

Note to physician Treatment:

Symptomatic treatment (decontamination, vital functions).

5. Fire-Fighting Measures

Extinguishing media

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Suitable extinguishing media: water spray, foam, dry powder, carbon dioxide

Unsuitable extinguishing media for safety reasons: water jet

Additional information: Avoid whirling up the material/product because of the danger of dust explosion.

Special hazards arising from the substance or mixture

Hazards during fire-fighting: Burning produces harmful and toxic fumes.

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. Dust can form an explosive mixture with air. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Dusty conditions may ignite explosively in the presence of an ignition source causing flash fire.

6. Accidental release measures

Further accidental release measures:

Dust in sufficient concentration can result in an explosive mixture in air. Handle to minimize dusting and eliminate open flame and other sources of ignition. Avoid the formation and build-up of dust - danger of dust explosion. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).

Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid all sources of ignition: heat, sparks, open flame. Use personal protective clothing. Information regarding personal protective measures, see section 8.

Environmental precautions

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

Methods and material for containment and cleaning up

For small amounts: Contain with dust binding material and dispose of. For large amounts: Sweep/shovel up. Avoid raising dust. Dispose of absorbed material in accordance with regulations.

Nonsparking tools should be used.

7. Handling and Storage

Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Closed containers should only be opened in well-ventilated areas.

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Protection against fire and explosion:

Avoid dust formation. Dust in sufficient concentration can result in an explosive mixture in air. Handle to minimize dusting and eliminate open flame and other sources of ignition. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids (2013 Edition) for safe handling.

Dust explosion class: Dust explosion class 1 (Kst-value >0 up to 200 bar m s-1).

Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Keep container tightly closed and dry. Protect against heat.

8. Exposure Controls/Personal Protection

No occupational exposure limits known.

Advice on system design:

It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks.

Personal protective equipment

Respiratory protection:

Breathing protection if breathable aerosols/dust are formed. Wear a NIOSH-certified (or equivalent) particulate respirator.

Hand protection:

Chemical resistant protective gloves

Consult with glove manufacturer for testing data.

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. Do not breathe dust. Avoid contact with the skin, eyes and clothing. No eating, drinking, smoking or tobacco use at the place of work. Hands and/or face should be washed before breaks and at the end of the shift. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Form:

Revision date : 2020/06/17 Page: 5/10 Version: 5.0 (30555081/SDS_GEN_US/EN) Odour: faint, of polyol Odour threshold: not applicable white Colour: pH value: 6 - 9 (50 g/l) 53 - 57 °C melting range: freezing range: 53 - 57 °C Boiling point: The product is a non-volatile solid. > 150 °C Flash point: not highly flammable Flammability: (VDI 2263, sheet 1, 1.1)Lower explosion limit: For solids not relevant for classification and labelling. Upper explosion limit: For solids not relevant for classification and labelling. negligible Vapour pressure: approx. 300 kg/m3 Bulk density: Vapour density: (20 °C) The product is a non-volatile solid. Partitioning coefficient nnot applicable octanol/water (log Pow): Viscosity, dynamic: (20 °C) not applicable, the product is a solid No data available. Viscosity, kinematic: Solubility in water: 176 g/l (23 °C) soluble Solubility (qualitative): solvent(s): organic solvents, soluble solvent(s): distilled water, Molar mass: 12,600 g/mol Evaporation rate: The product is a non-volatile solid.

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.

Dust explosivity characteristics: Kst: 58 m.bar/s

Dust explosion class: Dust explosion class 1 (Kst-value >0 up to 200 bar m s-1) (St 1)

Minimum ignition energy: 10 - 30 mJ, 6.42 hPa The product is capable of dust explosion. 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.

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Possibility of hazardous reactions

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

Conditions to avoid

Avoid excessive temperatures.

Incompatible materials

No applicable information available.

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

Acute toxicity

Assessment of acute toxicity: Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact.

Oral

Type of value: LD50 Species: rat Value: > 5,000 mg/kg (BASF-Test) The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Inhalation No data available.

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. Literature data.

<u>Assessment other acute effects</u> No data available.

<u>Irritation / corrosion</u> Assessment of irritating effects: Not irritating to the skin. Not irritating to the eyes.

<u>Skin</u> Species: rabbit Result: non-irritant Method: OECD Guideline 404

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

Eye

Species: rabbit Result: non-irritant Method: OECD Guideline 405 The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Sensitization

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

Guinea pig maximization test Species: guinea pig Result: Non-sensitizing. Method: OECD Guideline 406

Aspiration Hazard No data available.

Chronic Toxicity/Effects

Repeated dose toxicity

Experimental/calculated data: No data available.

Genetic toxicity

Assessment of mutagenicity: No mutagenic effect was found in various tests with bacteria and mammalian cell culture. Genetic toxicity in vitro: Ames-test with and without metabolic activation negative Literature data.

Carcinogenicity

Assessment of carcinogenicity: No data available concerning carcinogenic effects.

Reproductive toxicity

Assessment of reproduction toxicity: No reliable data are available concerning reproduction toxicity.

<u>Teratogenicity</u> Assessment of teratogenicity: No reliable data was available concerning teratogenicity.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. There is a high probability that the product is not acutely harmful to aquatic organisms.

Toxicity to fish

LC50 (96 h) > 120 mg/l, Oncorhynchus mykiss (OECD 203; ISO 7346; 92/69/EEC, C.1, static)

Aquatic invertebrates

EC50 (48 h) > 100 mg/l, Daphnia magna (Directive 79/831/EEC, static)

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Nominal concentration.

Analogous: Assessment derived from products with similar chemical character.

<u>Aquatic plants</u> EC50 (72 h) > 100 mg/l (biomass), Scenedesmus subspicatus (DIN 38412 Part 9, static) Nominal concentration. Analogous: Assessment derived from products with similar chemical character.

Assessment of terrestrial toxicity No data available.

Microorganisms/Effect on activated sludge

<u>Toxicity to microorganisms</u> OECD Guideline 209 aquatic activated sludge, domestic/EC50 (30 min): > 1,000 mg/l Nominal concentration.

Persistence and degradability

<u>Assessment biodegradation and elimination (H2O)</u> Not readily biodegradable (by OECD criteria). Poorly biodegradable.

Elimination information

0 - 10 % DOC reduction (28 d) (OECD 301 A (new version)) (aerobic, activated sludge, domestic) Not readily biodegradable (by OECD criteria).

Bioaccumulative potential

Bioaccumulation potential Significant accumulation in organisms is not to be expected.

Mobility in soil

<u>Assessment transport between environmental compartments</u> The substance will not evaporate into the atmosphere from the water surface. Adsorption to solid soil phase is possible.

Additional information

Sum parameter

Chemical oxygen demand (COD): 1,910 mg/g No data available.

Biochemical oxygen demand (BOD): < 2 mg/g

Other ecotoxicological advice: No data available.

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.

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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

Pharma TSCA, US released / exempt

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

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

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

Assessment of the hazard classes according to UN GHS criteria (most recent version):

16. Other Information

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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

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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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