

Material Safety Data Sheet (MSDS) for Corn Oil

Manufacturer: Shandong Ruisheng Pharmaceutical Excipients Co., Ltd.

Packaging Specifications: 20KG/drum, 190KG/drum

Manufacturer's Address: Middle Section of West Ring Road, Dong'e County,
Liaocheng City, Shandong Province

Contact Number: 0635-5018008

Section 1: Chemical Product and Company Identification

Chemical Name: Corn Oil

Main Component & Chemical Name: This product is a fatty oil prepared by hot pressing the germ of Zea mays seeds.

English Name: Corn Oil

Section 2: Composition/Information on Ingredients

Property: Mixture

Corn Oil is a fatty oil prepared by hot pressing the germ of Zea mays seeds, thus it is a mixture. Generally, corn oil mainly consists of glycerides of various fatty acids, with the fatty acid composition as follows: linoleic acid 39.4% ~ 62%, linolenic acid 0.5% ~ 1.5%, oleic acid 20.0% ~ 42.0%, palmitic acid 8.6% ~ 16.5%, stearic acid 1.0% ~ 3.3%, and trace amounts of other fatty acids.

CAS No.: 8001-30-7

Section 3: Hazards Identification

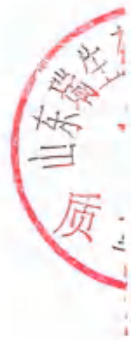
Hazard Class: Not defined by national standards

Routes of Exposure: Ingestion

Health Hazards: Harmful to the body if ingested

Environmental Hazards: Minor

Section 4: First-Aid Measures



General Advice: Consult a physician.

Inhalation: If inhaled, remove the victim to fresh air. Perform artificial respiration if breathing stops.

Skin Contact: Wash with soap and plenty of water.

Eye Contact: Rinse thoroughly with plenty of water for at least 15 minutes and seek medical advice.

Ingestion: Do not give anything by mouth to an unconscious person. Rinse mouth with water and seek medical advice.

Symptoms Requiring Immediate and Special Medical Attention: No detailed data available.

Section 5: Fire-Fighting Measures

Property: Not a flammable substance, but combustible

Extinguishing Media: Dry chemical powder, carbon dioxide

Special Hazards: In case of fire, the release of other toxic gases cannot be ruled out, e.g., Carbon Monoxide (CO).

Special Extinguishing Procedures: Avoid inhalation of dust/smoke/gases/fumes/vapors/spray.

Special Protective Equipment for Firefighters: Wear appropriate respiratory protection in case of insufficient ventilation.

Section 6: Accidental Release Measures

Protective Measures

Wear protective clothing and use respiratory protection to avoid exposure to smoke/dust/aerosols.

Environmental Precautions

Do not allow the product to enter sewage systems or any water sources.

Spill/Leakage Handling

Absorb with sand or other inert materials, or rinse with plenty of clean water, dilute and discharge into the wastewater collection system.

Section 7: Handling and Storage

Corn Oil is stable when stored in sealed, nitrogen-filled bottles. It may thicken and become rancid upon prolonged exposure to air. Corn Oil can be sterilized by dry heat,



e.g., at 150°C for 1 hour.

Corn Oil should be stored in airtight, light-proof containers in a cool and dry place, and excessive heating should be avoided.

According to relevant literature: Corn Oil is stable in an oxygen-free environment; corn oil emulsions may produce free fatty acids and become rancid during long-term storage, especially at high temperatures. Corn Oil should be filled in airtight, light-proof containers and stored at a temperature not exceeding 20°C.

In accordance with the provisions of Volume IV of the Chinese Pharmacopoeia 2020 Edition and stability study results, the storage conditions for corn oil are: protected from light, sealed, stored in a cool place.

Section 8: Exposure Controls/Personal Protection

Engineering Controls: Operate in a closed system with adequate ventilation.

Respiratory Protection: Wear self-priming filter type gas mask (half-mask) when the concentration in the air exceeds the limit; wear air respirator during emergency evacuation or first aid.

Eye Protection: Wear chemical safety goggles.

Body Protection: Wear chemical protective clothing resistant to poison penetration.

Hand Protection: Wear rubber gloves.

Other Protection: None.

Section 9: Physical and Chemical Properties

Main Component: Mixture

Physical State: Pale yellow clear oily liquid

Relative Density: 0.915 ~ 0.923

Acid Value: Not more than 0.6

Saponification Value: 187 ~ 195

Iodine Value: 108 ~ 128

Refractive Index: 1.472 ~ 1.475

Solubility: Slightly soluble in ethanol.

Section 10: Stability and Reactivity

Combustibility: Combustible

Reactivity: May thicken and become rancid upon prolonged exposure to air.

Stability: Relatively stable at low temperatures.

Section 11: Toxicological Information

Applications in Preparations

As a pharmaceutical excipient, corn oil is mainly used as a solvent for fat-soluble drugs, a dispersant and excipient for drugs, a solvent for intramuscular injections or an excipient for topical preparations. Emulsifiers containing up to 67% corn oil are also used in oral nutritional supplements, as well as in orally administered tablets or capsules.

Corn Oil has no incompatibility with most drugs in the above application processes, but titanium dioxide and zinc oxide used in cosmetic and pharmaceutical grade coating can sensitize the photo-oxidation of corn oil.

Maximum Dosage:

Oral: 918.00mg (marketed), 540mg

Sublingual: 1.70mg (marketed)

Topical: 75mg/g

References

1. Translated by Zheng Junmin. *Handbook of Pharmaceutical Excipients (4th Edition)*. Beijing: Chemical Industry Press, 2005:203
2. Pharmaceutical Excipient Database, Center for Drug Evaluation, National Medical Products Administration

Section 12: Ecological Information

Persistence and Degradability: Not readily biodegradable

Other Information:

Potential for Bioaccumulation: No expected accumulation in organisms.

Mobility in Soil: No detailed data available.

Additional Ecological Information: Do not allow undiluted or large quantities of the product to contact groundwater, water courses or sewage systems; Water Hazard Class: Slightly hazardous to water.

Other Adverse Effects: No detailed data available.

Section 13: Disposal Considerations

Waste Disposal Method: It is recommended to dispose of the product in strict accordance with government regulations.

Contaminated Containers and Packaging: It is recommended to discard in accordance with official regulations.

Section 14: Transport Information

Transport Hazard Class: Not specified

Environmentally Hazardous: No

Marine Pollutant: No

Special Precautions for Users: Not applicable

Section 15: Regulatory Information

Hazardous Chemicals List: The substance is not listed.

Chemical Safety Assessment: Not yet conducted.

Section 16: Other Information

None

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