

# School Material Safety Data Sheet

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Vegetable

CORN OIL

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## SECTION 1. INTRODUCTORY INFORMATION

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**MATERIAL NAME AND FORMULA:** CORN OIL; No Distinct Molecular Formula — see composition below

**SYNONYMS:** Maize Oil, Mazola Oil, Maydol

**CAS NUMBER:** 8001-30-7

**TYPICAL COMPOSITION:** Corn Oil\*; ca 100%

\* Composed largely of glycerides of the following: unsaturated linoleic and oleic acids and saturated palmitic and stearic acids.

**DOT CLASSIFICATION:** Not Listed (49 CFR 172.101-2)

**OSHA CLASSIFICATION:** Not Listed (29 CFR 1910.1000, Subpart Z)

**EPA CLASSIFICATION:** Not Listed (40 CFR 302.4)

**MANUFACTURER'S INFORMATION:** Always request material safety data sheets from your chemical supplier. These should indicate the manufacturer's emergency telephone number. See the Resources/Manufacturers Index for some of the larger manufacturers and available telephone numbers.



**DESCRIPTION:** Corn oil is a pale yellow liquid with a faint, characteristic odor.

**OVERVIEW:** This combustible, nontoxic material is used in soaps and lubricants, in paint, as a solvent, and commonly in foodstuffs. It may be found in a school setting, either in the science lab or home economics classroom area, or as an ingredient of products used by other staff members. Corn oil presents few hazards if used with care and reasonable precautions are taken.

## SECTION 2. USE AND STORAGE INFORMATION

### — PRELIMINARY PLANNING CONSIDERATIONS —

- **PROVIDE FOR SAFE DISPOSAL OF ALL CHEMICAL WASTE** generated in the school. Check applicable regulations prior to use.
- **Wear safety glasses or goggles** and appropriate protective clothing when working with this substance.
- Employees and students should know the location of eyewash and shower facilities in the vicinity of the area where this material is used. Be sure that eyewash stations and safety showers are kept in good working order at all times.
- Eliminate all possible ignition sources when using this combustible liquid.
- Corn oil containers for laboratory use should be labeled as such and marked "NOT FOR HUMAN CONSUMPTION" since they may become contaminated with other chemicals when used by a variety of staff members and students. Caution students not to taste or ingest any substance in lab unless specifically instructed to do so by a teacher.

### — USAGE PRECAUTIONS AND PROCEDURES —

- **READ THE LABEL** and follow all precautions.
- Practice good housekeeping to avoid unintentional mixing of incompatible materials. Do not allow residues or dust to build up in the lab or work area.
- For safety, **DO NOT WEAR CONTACT LENSES WHEN WORKING WITH CHEMICALS AND CHEMICAL PRODUCTS**; soft lenses may absorb irritants, and all lenses may concentrate them. Particles can also adhere to contact lens surfaces and cause corneal damage.
- After working lab supplies of with this material, always wash hands and face before eating, drinking, or smoking.
- Do not smoke in storage or use area.
- Keep corn oil away from strong oxidizing agents and heat or ignition sources.
- Remove and launder contaminated clothing before wearing again.
- Keep this and other laboratory materials away from notebooks, textbooks, and personal belongings to avoid contamination and the transport of chemical residues out of the lab/work area.
- Do not let corn oil for lab use come into contact with eyes, skin, or clothing. Avoid inhaling the vapor or mist from this chemical. Do not taste or swallow any substance in the lab unless it has been purchased fresh, specifically prepared for such use, and any possible contamination with other lab chemicals has been prevented.
- Clean up spilled material promptly and thoroughly.
- Corn oil thickens and becomes rancid upon prolonged exposure to air.

### — ADDITIONAL INFORMATION —

- Corn oil does not polymerize. It is stable at room temperature under normal handling and storage conditions.
- Incompatible materials include strong oxidizing agents.
- Corn oil has a moderate tendency to produce spontaneous heating.

### — PREFERRED STORAGE LOCATION AND METHODS —

- Storage area should be cool and well ventilated. Containers should be tightly closed.
- Do not store chemicals alphabetically by name; store them by chemical family instead, to keep compatibles together.
- Protect all chemical containers from physical damage and keep them out of direct sunlight.
- Do not permit smoking in areas where chemicals are stored.
- Purchase only amounts equivalent to one year's needs.
- Store with compatible materials on sturdy shelving, away from oxidizing agents and heat or ignition sources.
- Refrigeration may be desirable for corn oil kept for extended periods. Temperature-induced cloudiness may develop in refrigerated oils.

## SECTION 3. SPILLS AND DISPOSAL PROCEDURES

### IF MATERIAL IS SPILLED:

- Clean up spilled material promptly and thoroughly.
- Eliminate all ignition sources.
- Cover material with an inert solid absorbent (vermiculite, dry sand, etc.), and scoop it into an appropriate container (with a secure lid) for disposal in accordance with existing regulations. Dike the spill area with an inert absorbent material, as needed, to contain the spilled material.

### DISPOSAL OF SMALL QUANTITIES:

NOTE: Emptied containers could contain chemical residues; handle with care.

- Small quantities of corn oil may be disposed of in a landfill where lab wastes of low toxicity are permitted. Check regulations before disposal is necessary.
- Small quantities of waste material may be burned in an incinerator if approved methods and applicable regulations are followed.
- If the methods described above are not practical, feasible, or in accord with existing regulations, contact your supplier or a licensed disposal contractor for specific treatment/disposal procedures.

**DISPOSAL OF LARGER AMOUNTS:** Contact your supplier or a licensed disposal company.

**\*\* FOLLOW ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS FOR ALL WASTE DISPOSAL \*\***



**SECTION 4. HEALTH HAZARDS**

Corn oil has not been identified as a known or suspected carcinogen by the NTP, IARC, or OSHA.

Current OSHA PEL and ACGIH TLV: 8-hr TWA: None Established

**Toxicity Data:**

- Rat, Oral, TD<sub>50</sub>: 12,500 mg/kg (Reproductive effects: 15 to 19-day pregnancy)

See NIOSH, RTECS, for additional data with references to reproductive and irritative effects.

Corn oil is relatively nonhazardous in routine use.

No acute or chronic effects have been noted in the references cited.

Skin contact and ingestion are the two primary routes of entry.

**SECTION 5. FIRST AID PROCEDURES****Eye contact:**

- Flush eyes promptly, including under the eyelids, with plenty of running water. Continue for at least 15 minutes.
- Get prompt medical attention.\*

**Skin contact:**

- Wash exposed areas of skin with soap and water.
- Get medical attention if irritation occurs.\*

**Inhalation:**

- Remove victim to fresh air; restore/support his breathing as necessary.
- Get medical help if victim is breathing with difficulty or coughing.\*

**Ingestion:**

- Rinse victim's mouth thoroughly with water.
- Give victim several glasses of milk or water to drink. Do not induce vomiting unless instructed by a physician to do so.
- Never give anything by mouth to someone who is unconscious or convulsing.
- Contact medical personnel if amount ingested was large or the corn oil may have been contaminated with other materials.

\* Get medical help (in school, paramedic, or community) for further treatment, observation, and support after first aid.

**SECTION 6. FIRE PROCEDURES AND DATA**

- Corn oil is a combustible liquid. It is a slight fire hazard when exposed to heat or open flame.
- If possible to do so safely, remove containers of this material from the fire area.
- Extinguishing media: Water fog, carbon dioxide, dry chemical, or alcohol type of foam.
- For major fires, or if large quantities of this material are involved, fire fighters should wear appropriate protective clothing and use respiratory protection. Self-contained breathing apparatus is recommended.
- Use of a direct stream of water may not be effective and could scatter the fire.
- A water spray may be used to cool fire-exposed containers and disperse vapors.

HAZARDOUS DECOMPOSITION PRODUCTS INCLUDE: Carbon dioxide (CO<sub>2</sub>) and carbon monoxide (CO).

FLASH POINT: 490°F (254°C)

METHOD: C.C. 610°F (321°C) O.C. (for cooking type oil)

AUTOIGNITION TEMPERATURE: 740°F (393°C)

FLAMMABILITY LIMITS IN AIR (Vol %): Not Found

**SECTION 7. PHYSICAL DATA**

BOILING POINT (@ 1 atm): Not Found

ABSOLUTE VISCOSITY: Not Found

VAPOR PRESSURE (@ 20°C, mm Hg): Negligible

VAPOR DENSITY (air=1): Not Found

SOLUBILITY IN WATER (@ 20°C): Insoluble\*

SPECIFIC GRAVITY (H<sub>2</sub>O=1): ca 0.92

MELTING POINT: 14°F (-10°C)

SAPONIFICATION VALUE: 187-196

IODINE VALUE: 102-133

MOLECULAR WEIGHT: Not Applicable (No discrete molecular formula)

EVAPORATION RATE (diethyl ether=1): Negligible

% VOLATILE: Negligible

\* Soluble in chloroform, carbon disulfide, chloroform ether, benzene. Slightly soluble in alcohol.

REFERENCES: Genium's Industrial MSDS 650 (4/88) and references 1, 57, 73, 81-94, 103, 506, 521, 528-529.

(see glossary for titles)

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