

# Material Safety Data Sheet



**PRODUCT NAME: JENKINOL 680 (EPOXIDIZED SOYBEAN OIL)**

## CHEMICAL PRODUCT AND DISTRIBUTOR IDENTIFICATION

TRADE NAME: JENKINOL 680 (ESO)  
CAS #: 8013-07-8  
DATE: August 15, 2012

DISTRIBUTOR: ACME-HARDESTY COMPANY  
ADDRESS: 450 Sentry Parkway  
Blue Bell, PA 19422

TELEPHONE: (866) 226 – 3834  
FAX: (215) 591 – 3620  
EMERGENCY: CHEMTREC (800) 424-9300

## COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS#	Wt/Wt	OSHA HAZARDOUS
Soybean Oil, Epoxidized	8013-07-8	<= 100 %	N

The substance(s) marked with a "Y" in the Hazard column above, are those identified as hazardous chemicals under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

## HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

EMERGENCY OVERVIEW: COLOR: Yellow  
PHYSICAL STATE: Liquid  
FORM: Viscous  
ODOR: Slight, vegetable oil

### POTENTIAL HEALTH EFFECTS:

PRIMARY ROUTES OF ENTRY: Inhalation and skin contact.

ACUTE EXPOSURE SIGNS/SYMPTOMS: The product, in the form supplied, is not anticipated to produce significant adverse human health effects.

SKIN: Practically nontoxic. Slightly irritating. (based on animal studies)  
INHALATION: No more than slightly toxic. (based on animal studies)  
EYES: Slightly irritating. (based on animal studies)  
INGESTION: Practically nontoxic. (based on animal studies)

NOTE: Handle in accordance with good industrial hygiene and safety practice.

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FIRST AID MEASURES

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**SKIN:** In case of contact, immediately flush skin with plenty of water.  
Remove material from clothing.  
Wash clothing before reuse.  
Thoroughly clean shoes before reuse.

**INHALATION:** If inhaled, remove victim to fresh air.

**EYES:** Immediately flush eye(s) with plenty of water.

**INGESTION:** If swallowed, DO NOT induce vomiting.  
Get medical attention.  
Never give anything by mouth to an unconscious person.

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FIRE-FIGHTING MEASURES

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**FIRE AND EXPLOSIVE PROPERTIES:**

**FLASH POINT:** 590°F /310°C (Method: Standard ASTM D92)  
**AUTOIGNITION TEMP:** No data available  
**LOWER FLAMMABLE LIMIT (LFL):** No data available  
**UPPER FLAMMABLE LIMIT (UFL):** No data available

**SUITABLE EXTINGUISHING MEDIA:** Water spray, Carbon dioxide (CO<sub>2</sub>), Foam, Dry chemical

**PROTECTIVE EQUIPMENT:** Fire fighters and others who may be exposed to products of combustion should wear full fire-fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand / NIOSH approved or equivalent).

Fire-fighting equipment should be thoroughly decontaminated after use.

**FIRE FIGHTING ADVICE:** In case of fire, use water spray.  
Do not use a solid stream of water.  
A solid stream of water can cause frothing and spattering.

**FIRE/ EXPLOSION HAZARDS:** Acrolein can be generated at 550 F.  
When burned, the following hazardous products of combustion can occur:  
Carbon monoxide  
Carbon dioxide (CO<sub>2</sub>)

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ACCIDENTAL RELEASE MEASURES

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**SPILL/ LEAK:** Prevent further leakage or spillage if you can do so without risk.  
Ventilate the area. Avoid generation of vapors.  
Contain and collect spillage with non-combustible absorbent material such as clean sand, earth, diatomaceous earth or non-acidic clay  
Place into suitable properly labeled containers for prompt disposal.  
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.  
Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

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HANDLING AND STORAGE

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**HANDLING:** Handle in accordance with good industrial hygiene and safety practices.  
These practices include avoiding unnecessary exposure and removal of material from eyes, skin and clothing.

**STORAGE:** This material is not hazardous under normal conditions; however, material should be stored in closed containers.  
Store in a secure area to prevent container damage and subsequent spillage.  
It is recommended that containers be raised above floor or ground during extended storage periods to prevent container corrosion due to standing water.

**STORAGE STABILITY:** Stable under normal conditions.

**STORAGE INCOMPATIBILITY:** Store separate from: Mineral acids  
Strong acids

**TEMPERATURE TOLERANCE:** Do not store above: 399 °F (204 °C)

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STABILITY AND REACTIVITY

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**STABILITY:** Chemically stable under normal/ anticipated storage, handling and processing conditions.

**HAZARDOUS REACTIONS:** Hazardous polymerization may occur.

**MATERIALS TO AVOID:** Strong acids  
Mineral acids  
Contact with strong acid may result in volume expansion  
Hazardous polymerization may occur if contaminated with strong mineral acids.

**CONDITIONS/HAZARDS TO AVOID:** See Handling and Storage section for specified conditions.

**HAZARDOUS DECOMPOSITION PRODUCTS:**  
Thermal decomposition giving flammable and toxic products: Carbon monoxide  
Carbon dioxide (CO<sub>2</sub>)  
Acrolein at high temperature

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EXPOSURE CONTROLS / PERSONAL PROTECTION

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**ENGINEERING CONTROLS:** Investigate engineering techniques to reduce exposures below airborne exposure limits or to otherwise reduce exposures.  
Provide ventilation if necessary to minimize exposures or to control exposure levels to below airborne exposure limits (if applicable see above).  
If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

**EYE/FACE PROTECTION:** Use good industrial practice to avoid eye contact.

**SKIN PROTECTION:** Minimize skin contamination by following good industrial hygiene practice.  
Wearing rubber gloves is recommended.  
Wash hands and contaminated skin thoroughly after handling.

**RESPIRATORY PROTECTION:** Where airborne exposure is likely or airborne exposure limits are exceeded use NIOSH approved respiratory protection equipment appropriate to the material and/or its components.  
Consult respirator manufacturer to determine appropriate type equipment for a given application.  
Observe respirator use limitations specified by NIOSH or the manufacturer.  
For emergency and other conditions where there may be a potential for significant exposure or where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary

PHYSICAL/CHEMICAL CHARACTERISTICS

APPEARANCE/ODOR:	Light yellow viscous liquid, slight vegetable odor.
pH:	No data available
DENSITY:	No data available
SPECIFIC GRAVITY (H <sub>2</sub> O=1):	0.994
VAPOR PRESSURE:	< 0.1 mmHg (77°F / 25°C)
VAPOR DENSITY:	Nonvolatile
MELTING POINT/RANGE, °C:	No data available
FREEZING POINT, °C:	0°C / 32°F
BOILING POINT:	Decomposes on heating
SOLUBILITY: WATER:	0.01%
OTHER SOLVENTS:	Alcohols, Ether, Esters, Hydrocarbons
EVAPORATION RATE:	No data available
% VOLATILES:	0.07

ECOLOGICAL INFORMATION

BIODEGRADATION:	Readily biodegradable. (Modified Sturm Test, 28 d) biodegradation 79 %/OECD Guideline 301 B
CHEMICAL OXYGEN DEMAND:	COD 2,240 mg/g Low potential to bio-accumulate
OCTANOL WATER PARTITION COEFFICIENT:	log Pow > 6.2 (OECD Guideline 117)
ECOTOXICOLOGY:	
AQUATIC TOXICITY DATA:	Fish LC50 > limit of water solubility
AQUATIC INVERTEBRATES:	Daphnia magna (Water flea) EC50 > limit of water solubility
ALGAE:	Algae EC50 > limit of water solubility

TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:	
ORAL:	Practically nontoxic. (rat) LD50 = 22,400 mg/kg. Practically nontoxic. (rat) LD50 > 5,000 mg/kg.
DERMAL:	Practically nontoxic. (rabbit) LD50 > 19,900 mg/kg.
INHALATION:	No deaths occurred. (rat) 8 h Exposure time (concentrated vapor)
SKIN IRRITATION:	Slightly irritating. (rabbit)
EYE IRRITATION:	Slightly irritating. (rabbit)
SKIN SENSITIZATION:	Repeated skin exposure. (guinea pig): No skin allergy was observed.
REPEATED TOXICITY DOSE:	Repeated dietary administration to rat / affected organ(s): kidney, liver, testes, uterus / increased mortality (Repeated exposure at high concentrations)
CARCINOGENICITY:	Chronic oral administration to rat: No increase in tumor incidence was reported. Chronic dermal administration to mice: No increase in tumor incidence was reported.
GENOTOXICITY (IN-VITRO):	No genetic changes observed in laboratory tests using: bacteria, human cells, animal cells
DEVELOPMENTAL TOXICITY:	Exposure during pregnancy. oral (rat) / No birth defects were observed.
REPRODUCTIVE EFFECTS:	Reproduction Test. oral (rat) / No toxicity to reproduction.

TRANSPORT INFORMATION

US Department of Transportation (DOT):	Not regulated
International Maritime Dangerous Goods Code (IMDG):	Not regulated

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**DISPOSAL CONSIDERATIONS**

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**WASTE DISPOSAL:** Recycling is preferred to disposal or incineration when possible.  
If recycling is not an option, incinerate or dispose of in accordance with federal, state, and local regulations.  
Consult a regulatory specialist to determine appropriate state or local reporting requirements,  
Consult a regulatory specialist for assistance in waste characterization and/or hazardous waste disposal and  
other requirements listed in pertinent environmental permits.

**NOTE:** Chemical additions to, processing of, or otherwise altering this material may make this waste management  
information incomplete, inaccurate, or otherwise inappropriate.  
Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal  
laws and regulations.

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**REGULATORY INFORMATION**

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<b>CHEMICAL INVENTORIES:</b>	<b>TSCA:</b>	US. Toxic Substances Control Act
	<b>EU EINECS:</b>	EINECS Conforms to
	<b>AICS:</b>	Australia. Industrial Chemical (Notification and Assessment) Act
	<b>CEPA:</b>	Canada. Canadian Environmental Protection Act
	<b>DSL:</b>	Domestic Substances List. (Can. Gaz. Part II, Vol. 133)
	<b>ENCS:</b>	Japan. Kashin-Hou Law List
	<b>KECI:</b>	Korea. Toxic Chemical Control Law (TCCL) List
	<b>PICCS:</b>	Philippines. Toxic Substances and Hazardous and Nuclear Waste Control Act
	<b>IECSC:</b>	China. Inventory of Existing Chemical Substances

**UNITED STATES – FEDERAL REGULATIONS:**

**SARA Title III – Section 302:** Components in this product are either not SARA Section 302 regulated, or regulated but  
(Extremely Hazardous Chemicals) present in negligible concentrations.

**SARA Title III - Section 311/312:** No SARA Hazards  
(Hazard Categories)

**SARA Title III – Section 313:** Material does not contain any chemical components with known CAS # that exceed  
(Toxic Chemicals) threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**CERCLA – Reportable Quantity (RQ):** Components in this product are either not CERCLA regulated, regulated but present in  
negligible concentrations, or regulated with no assigned reportable quantity.

**OSHA Regulated Carcinogens:**

**NTP:** No component present at levels  $\geq 0.1\%$  identified as a known or anticipated carcinogen by NTP.

**IARC:** No component present at levels  $\geq 0.1\%$  identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA:** No component present at levels  $\geq 0.1\%$  identified as a carcinogen, or potential carcinogen, by OSHA.

**UNITED STATES – STATE REGULATIONS:**

	<u>Chemical Name</u>	<u>CAS-No.</u>
New Jersey Right to Know:	Soybean oil, Epoxidized	8013-07-8
Pennsylvania Right to Know:	Soybean oil, Epoxidized	8013-07-8
California Prop 65:	This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive defects.	

The data herein are based on our current knowledge and believed to be reliable. Acme-Hardesty Co., provides this information without any  
representation or warranty, expressed or implied, regarding its accuracy or correctness.

Users must make their own determination that handling, storage and use of the product in the anticipated manner is safe and appropriate. Because  
these actions of the user are out of our control, and may be beyond our knowledge, we do not assume responsibility and expressly disclaim liability for  
loss, damage, expense or any other claim arising out of or in any way connected with the handling, storage, use or disposal of the product.

Disposal of containers must comply with applicable federal, state and local laws and regulations. Empty containers should never be given to individuals.