Material Safety Data Sheet

ACME HARDESTY
OLEOCHEMICALS
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PRODUCT NAME: METHYL OLEATE PME 1898 PK

CHEMICAL PRODUCT AND DISTRIBUTOR IDENTIFICATION

TRADE NAME: METHYL OLEATE PME 1898 PK
PRODUCT NAME: Methyl Oleate, Palm Kernel-based
CAS #: 112-62-9
DATE: November 12, 2010

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

TELEPHONE: (866) 226 – 3834
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COMPOSITION / INFORMATION ON INGREDIENTS

SYNONYMS: Methyl octadecanoate, Oleic acid methyl ester

COMPOSITION	CHEMICAL FORMULA	CAS #	WT/WT, %	EC NO
Methyl Oleate	$C_{19}H_{36}O_2$	112-62-9	68 – 78	203-992-5
Methyl Linoleate	$C_{19}H_{34}O_2$	112-63-0	7 – 13	203-993-0
Methyl Stearate	$C_{19}H_{38}O_2$	112-61-8	7 – 12	203-990-4
Methyl Palmitate	$C_{17}H_{34}O_2$	112-39-0	0 – 7	203-966-3

HAZARDS IDENTIFICATION

Classified as non-hazardous to human and environment

FIRST AID MEASURES

INHALATION: ACUTE/HAZARD SYMPTOM: May cause irritation
FIRST AID: Remove source of contamination r move victim to fresh air.
If adverse effects occur, remove to uncontaminated area.
Give artificial respiration if not breathing.
Get immediate medical attention.

SKIN CONTACT: ACUTE/HAZARD SYMPTOM: May cause redness
FIRST AID: Wash off with plenty of water and soap.
If skin irritation occurs, seek medical advice/attention
Take off contaminated clothing and wash before reuse

FIRST AID MEASURES (Continued)

EYE CONTACT:	ACUTE/HAZARD SYMPTOM:	May cause irritation
	FIRST AID:	Rinse cautiously with water for several minutes Remove contact lenses, if present and easy to do, and continue rinsing If eye irritation persists, seek medical advice/attention
INGESTION:	ACUTE/HAZARD SYMPTOM:	May cause irritation
	FIRST AID:	Rinse mouth and do NOT induce vomiting If vomiting occurs, keep head lower than hips to help prevent aspiration If person is unconscious, turn head to the side Seek medical attention immediately

FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA:	Dry chemical, appropriate foam or carbon dioxide
SPECIFIC HAZARDS:	Combustible when exposed to heat or flame Thermal decomposition will evolve irritant vapors
PROTECTION FOR FIRE-FIGHTERS:	Move container from fire area if it can be done without risk Do not scatter spilled material with high-pressure water streams Dike for later disposal Use extinguishing agents appropriate for surrounding fire Avoid inhalation of material or combustion by-products Stay upwind and keep out of low areas

ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:	Avoid contact with eyes. Do not breathe vapor.
ENVIRONMENTAL PRECAUTIONS:	Minimize contamination of drains, surface, and ground waters.
METHODS FOR CLEANING UP:	
SMALL SPILLS:	Absorb with inert material and put spilled material in appropriate container for disposal
LARGE SPILLS:	Absorb with inert material and put spilled material in appropriate container for disposal Ventilate area and wash spill site and allow to evacuate through the sanitary system

HANDLING AND STORAGE

HANDLING:	Keep away from heat and sources of ignition Empty containers pose a fire risk Evaporate the residue under a fume hood Ground all equipment containing material Do not ingest – If ingested, seek medical advice immediately Avoid contact with skin and eyes Do not breathe vapors Wear suitable protective clothing in case of insufficient ventilation Wear suitable respiratory equipment
STORAGE:	Store in the original closed containers Can be stored in most common storage vessels including carbon steel Keep in cool, dry place Storage Class: VCI-Storage Class: 3B (BRD) Safe Storage/Transport Pressure: Ambient Load/Unload Temperature: Ambient

EXPOSURE CONTROLS / PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE:	No occupational exposure limits have been established.
VENTILATION:	Provide local exhaust ventilation system Ensure compliance with applicable exposure limits
PERSONAL PROTECTIVE EQUIPMENT:	
SKIN/BODY PROTECTION:	Wear chemical resistant gloves
EYE PROTECTION:	Wear splash resistant safety goggles and face shields
RESPIRATORY PROCTECTION:	May be needed under conditions of frequent use of heavy exposure Consider warning properties before use Any Chemical cartridge respirator with organic vapor cartridge(s) Any chemical cartridge respirator with full face piece & organic vapor cartridge Any air-purifying respirator with a full face piece and an organic vapor canister
ENGINEERING MEASURES:	Ensure ventilation or local exhaust if formation of vapor occurs.
HYGIENE MEASURES:	Good industrial hygiene should be followed.

PHYSICAL AND CHEMICAL PROPERTIES

THE VALUES LISTED BELOW ARE NOT PRODUCT SPECIFICATIONS:

APPEARANCE:	Yellowish liquid
ODOR:	Musty
ODOR THRESHOLD:	Not available
pH:	Not Applicable
MELTING POINT, °C:	Approx. -19°C
BOILING POINT, °C:	> 204 @ 760 mm Hg
FLASH POINT, °C:	149°C (Pensky-Marten Closed Cup)
EVAPORATION RATE:	Not applicable
FLAMMABILITY (Solid/Liquid):	OSHA Flammability Class III-B
VAPOR PRESSURE @ 20°C:	< 1 mm Hg
VAPOR DENSITY (Air=1):	Not available
RELATIVE DENSITY @ 25°C, g/cm^3:	0.87
SOLUBILITY IN WATER @ 20°C:	Insoluble
PARTITION COEFFICIENT: n-octanol/water:	Not available
AUTO-IGNITION TEMPERATURE:	Not available
DECOMPOSITION TEMPERATURE, °C:	Not available
VISCOSITY @ 25°C:	Approx. 5 mPa.s
EXPLOSION LIMITS:	Doesn’t contain explosive properties
OXIDATION PROPERTIES:	Doesn’t contain oxidizing properties

STABILITY AND REACTIVITY

REACTIVITY:	Not a self-reactive substance
CHEMICAL STABILITY:	Stable at normal temperatures and pressure
CONDITIONS TO AVOID:	Heat, flames, sparks and other sources of ignition
MATERIALS TO AVOID:	Incompatible materials/oxidizing agents and strong bases
HAZARDOUS REACTIONS:	Will not polymerize
HAZARDOUS DECOMPOSITION PRODUCTS:	Thermal decomposition will evolve irritant vapors Thermal decomposition products: Oxides of carbon and water

TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Palm Oil Fatty Acid Methyl Esters (CAS# 91051-34-2)/Methyl Oleate:	LD50 (oral, rat) > 2,000 mg/kg body weight
Methyl Oleate:	LD 50 (dermal) > 5,000 mg/kg body weight LC 50 (inhalation) = Not available

SKIN CORROSION/IRRITATION:
C16-18 and C18-unsaturated Fatty Acid Methyl Esters (CAS# 67762-38-3):
Skin Irritant: Not classified (rabbit)
Methyl Oleate:
Skin Irritant: not classified (humans)

EYE DAMAGE/IRRITATION:
C16-18 and C18-unsaturated Fatty Acid Methyl Esters (CAS# 67762-38-3):
Eye Irritant: Not classified (rabbit)

SENSITIZATION:
C16-18 and C18-unsaturated Fatty Acid Methyl Esters (CAS# 67762-38-3):
Sensitization: No evidence (guinea pig)
Methyl Oleate:
Sensitization: No evidence (humans)

STOST – SINGLE/REPEATED EXPOSURE: Not available

ASPIRATION HAZARD: Not available

CMR EFFECTS:

CARCINOGENICITY: Not listed by ACGIH, IARC, NTP, DFG or OSHA

GERM CELL MUTAGENICITY:
C16-18 and C18-unsaturated Fatty Acid Methyl Esters (CAS# 67762-38-3):
Negative in AMES Test
Methyl Oleate: Negative in AMES Test

REPRODUCTIVE TOXICITY:
CA Prop 65 Developmental Toxin
U.S. TRI Developmental Toxin
CA Prop 65 Female Reproductive Toxin
California Proposition 65 Male Reproductive Toxin
U.S. TRI Reproductive Toxin

ECOLOGICAL INFORMATION

ACUTE TOXICITY:	Palm Oil Fatty Acid Methyl Esters (CAS# 91051-34-2):
	ACUTE: LC50 (fish) > 100 mg/L
	CHRONIC: Not available
MOBILITY IN SOIL:	Not available
BIODEGRADABILITY:	Readily Biodegradable
BIO-ACCUMULATIVE POTENTIAL:	Not available
OTHER ADVERSE EFFECTS:	Not available

DISPOSAL CONSIDERATIONS

Disposal is to be performed in compliance with all Federal, State/Provincial and local regulations.
Do not dispose of via sinks, drains or into the immediate environment.

TRANSPORT INFORMATION

UN MODEL REGUALTION:	Not classified	
LAND TRANSPORT ADR/RID/AND:	Not classified	
AIR TRANSPORT ICAO-TI and IATA-DGR:	Not classified	
MARITIME TRANSPORT IMDG:	Not classified	
U.S. DOT INFORMATION:	Not classified	
BULK TRANSPORT:		
ANNEX II OF MARPOL 73/78:	Name:	Fatty Acid Methyl Esters (m)
	Pollution Category:	Y
	Ship Type:	2

REGULATORY INFORMATION

GHS CLASSIFICATION:	Not classified as hazardous material to human or environment	
U.S. FEDERAL REGULATIONS:	No product components are listed under:	SARA Section 302 (40 CFR 355) SARA Section311/312 (40 CFR 370.21) SARA Section 313 (40 CFR 372.65) CERCLA (40 CFR 302.4)
GERMANY WATER CLASIFICATION/ WGK (Wassergefährdungsklassen):		Number 834, Hazard Class 1 – Low hazard to waters

NATIONAL CHEMICAL INVENTORY LISTING:	EUROPE (EINECS):	Compliant
	USA (TSCA):	Compliant
	CANADA (DSL):	Compliant
	AUSTRALIA (AICS):	Compliant
	JAPAN (ENCS):	Compliant
	CHINA (IECSC):	Compliant
	KOREA (ECL):	Compliant
	PHILIPINES (PICCS):	Compliant
	NEW ZEALAND (NZIOC):	Compliant