

MATERIAL SAFETY DATA SHEET

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MSDS Number: A777 ; B777 ;

I. CHEMICAL PRODUCT IDENTIFICATION

Product Name: OLEIC ACID LEAD FLUX
HMIS Ratings:
 Health: Minimal(0)
 Flammability: Slight(1)
 Instability/Reactivity: Slight(1)

NFPA Ratings:
 Health: Slight(1)
 Flammability: Slight(1)
 Instability/Reactivity: Minimal(0)

Other: CONTACT RATING: 1
 LAB PROTECTIVE EQUIPMENT: GOGGLES, LAB COAT, PROPER GLOVES
 STORAGE, COLOR CODE: GREEN (GENERAL STORAGE)
 EMERGENCY OVERVIEW:
 CAUTION ! MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.
 LABEL HAZARD WARNING: CAUTION MAY CAUSE IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT
 LABEL PRECAUTIONS: AVOID CONTACT WITH SKIN, EYES AND CLOTHING.
 WASH THOROUGHLY AFTER HANDLING.
 AVOID BREATHING VAPOR OR MIST
 USE WITH ADEQUATE VENTILATION
 KEEP CONTAINER CLOSED

LABEL FIRST AID:
 IN CASE OF CONTACT, IMMEDIATELY FLUSH SKIN OR EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. CALL A PHYSICIAN IF IRRITATION DEVELOPS OR PERSISTS. IF INHALED, REMOVE TO FRESH AIR. GET MEDICAL ATTENTION FOR ANY BREATHING DIFFICULTY.

II. COMPOSITION, INFORMATION ON INGREDIENTS

Chemical Ingredients	C.A.S. Number	% By Weight	ACGIH TLV TWA/STEL	OSHA PEL TWA/STEL	Other TWA/STEL	LD50	LC50
9-OCTADECENOIC ACID, (Z)	112-80-1	100					
Notes	HAZARDOUS						

III. HAZARDS IDENTIFICATION PRIMARY ROUTE OF ENTRY

Eyes: MILD IRRITANT ON PROLONGED CONTACT CAUSING REDDENING, POSSIBLY BLURRED VISION.

Skin: MILD IRRITANT, POSSIBLY CAUSING SURFACE INFLAMMATION ESPECIALLY ON PROLONGED CONTACT WITH OILY SKIN.

Ingestion: EXTREMELY LARGE ORAL DOSAGES MAY PRODUCE GASTROINTESTINAL DISTURBANCES.

Inhalation: MAY CAUSE IRRITATION TO THE RESPIRATORY TRACT.

Signs and Symptoms of Exposure: CHRONIC EXPOSURE: NO ADVERSE HEALTH EFFECTS EXPECTED.

IV. FIRST AID MEASURES

Eyes: IN CASE OF CONTACT, FLUSH EYE WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION IF IRRITATION DEVELOPS.

Skin: IN CASE OF CONTACT, IMMEDIATELY FLUSH SKIN WITH PLENTY OF SOAP AND WATER FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. WASH CLOTHING BEFORE REUSE. GET MEDICAL ATTENTION IF IRRITATION DEVELOPS OR PERSISTS.

Ingestion: IF LARGE AMOUNTS WERE SWALLOWED, GIVE WATER TO DRINK AND GET MEDICAL ADVICE.

Inhalation: REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. GET MEDICAL ATTENTION.

V. FIRE FIGHTING MEASURES

Flash Point: 372°F (189°C)

Lower Flammability Limit: NOT AVAILABLE

Upper Flammability Limit: NOT AVAILABLE

Extinguishing Agents: DRY CHEMICALS, FOAM, OR CO₂, WATER SPRAY MAY BE USED TO KEEP FIRE EXPOSED CONTAINERS COOL.

Unusual Fire or Explosion Hazards: EXPLOSION IS POSSIBLE AT OR ABOVE CONDITIONS LISTED BELOW

Fire Fighting Procedures: IN THE EVENT OF A FIRE, WEAR FULL PROTECTIVE CLOTHING AND NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN THE PRESSURE DEMAND OR OTHER POSITIVE PRESSURE MODE. DO NOT USE HEAVY STREAMS OF WATER, MOLTEN MATERIAL WILL FLOAT ON WATER.

Other: AS WITH MOST ORGANIC LIQUIDS, FIRE IS POSSIBLE AT ELEVATED TEMPERATURES OR BY CONTACT WITH AN IGNITION SOURCE.

VI. ACCIDENTAL RELEASE MEASURES

Containment/Cleanup: VENTILATE AREA OF LEAK OR SPILL. WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT AS SPECIFIED IN SECTION 8. ISOLATE HAZARD AREA. KEEP UNNECESSARY AND UNPROTECTED PERSONNEL FROM ENTERING. CONTAIN AND RECOVER LIQUID WHEN POSSIBLE. NEUTRALIZE WITH ALKALINE MATERIAL (SODA ASH, LIME). THEN ABSORB WITH AN INERT MATERIAL (E.G., VERMICULITE, DRY SAND, EARTH) AND PLACE IN A CHEMICAL WASTE CONTAINER. DO NOT USE WITH COMBUSTIBLE MATERIALS, SUCH AS SAW DUST. DO NOT FLUSH TO SEWER! REMOVE ALL SOURCES OF IGNITION.

VII. HANDLING AND STORAGE

Other: KEEP IN A TIGHTLY CLOSED CONTAINER, STORED IN A COOL, DRY, VENTILATED AREA. PROTECT AGAINST PHYSICAL DAMAGE. ISOLATE FROM ANY SOURCE OF HEAT OR IGNITION. OUTSIDE OR DETACHED STORAGE IS RECOMMENDED. STORE IN THE DARK. CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTY SINCE THEY RETAIN PRODUCT RESIDUES (VAPORS, LIQUID) OBSERVE ALL WARNINGS AND PRECAUTIONS LISTED FOR

THE PRODUCT.

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes:	USE CHEMICAL SAFETY GOGGLES AND/OR A FULL FACE SHIELD WHERE SPLASHING IS POSSIBLE. MAINTAIN EYE WASH FOUNTAIN AND QUICK-DRENCH FACILITIES IN WORK AREA.
Skin:	WEAR PROTECTIVE GLOVES AND CLEAN BODY-COVERING CLOTHING.
Respiratory:	BE SURE TO USE A MSHA/NIOSH APPROVED RESPIRATOR OR EQUIVALENT.
Engineering:	A SYSTEM OF LOCAL AND/OR GENERAL EXHAUST IS RECOMMENDED TO KEEP EMPLOYEE EXPOSURES AS LOW AS POSSIBLE. LOCAL EXHAUST VENTILATION IS GENERALLY PREFERRED BECAUSE IT CAN CONTROL THE EMISSIONS OF THE CONTAINMENT AT ITS SOURCE, PREVENTING DISPERSION OF IT INTO THE GENERAL WORK AREA.
Other:	AIRBORNE EXPOSURE LIMITS: NONE ESTABLISHED

IX. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	PALE YELLOW OR BROWNISH-YELLOW OILY LIQUID
Boiling Point:	680°F (360°C)
pH:	NO INFORMATION FOUND
Solubility in Water:	INSOLUBLE IN WATER
Specific Gravity:	0.895 @ 25°C/25°C
Vapor Pressure:	1.0 @ 176° C (349°F)
Vapor Density:	NO INFORMATION FOUND
Physical State:	LIQUID
Volatile Content:	% VOLATILES BY VOLUME @21°C (70°F): 0
Other:	MELTING POINT: 61°F (16.3°C) EVAPORATION RATE: NO INFORMATION FOUND

X. STABILITY AND REACTIVITY

Stability:	STABLE UNDER ORDINARY CONDITIONS OF USE AND STORAGE. ON EXPOSURE TO AIR, IT CAN OXIDE AND TURN YELLOW TO BROWN IN COLOR WITH A RANCID ODOR.
Hazardous Polymerization:	WILL NOT OCCUR
Hazardous Decomposition Products:	CARBON DIOXIDE AND CARBON MONOXIDE MAY FORM WHEN HEATED TO DECOMPOSITION
Incompatible Products:	ALUMINUM, PERCHLORIC ACID, OXIDIZING AGENTS
Conditions To Avoid:	EXCESSIVE HEAT OR COLD, LIGHT, AIR

XI. TOXICOLOGICAL INFORMATION

Other:	ORAL RAT LD50: 25 GM/KG IRRITATION SKIN RABBIT: 500 MG OPEN MILD INVESTIGATED AS A TUMORIGEN AND MUTAGEN CANCER LISTS INGREDIENT NTP CARCINOGEN: KNOWN ANTICIPATED IABC CATAGORY
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9-OCTADECENOIC ACID, (Z) CAS NO. 112-86-1
NO \ NO \ NONE

XII. ECOLOGICAL INFORMATION

Environmental Fate and Distribution: WHEN RELEASED INTO THE AIR THIS MATERIAL IS EXPECTED TO BE READILY DEGRADED BY REACTION WITH PHOTOCHEMICALLY PRODUCED HYDROXYL RADICALS. WHEN RELEASED INTO THE AIR, THIS MATERIAL IS EXPECTED TO HAVE A HALF-LIFE OF LESS THAN 1 DAY. WHEN RELEASED INTO THE SOIL, THIS MATERIAL IS EXPECTED TO READILY BIODEGRADE. WHEN RELEASED INTO THE WATER, THIS MATERIAL IS EXPECTED TO HAVE A HALF-LIFE BETWEEN 1 AND 10 DAYS. WHEN RELEASED INTO WATER, THIS MATERIAL MAY EVAPORATE TO A MODERATE EXTENT. THIS MATERIAL HAS A LOG OCTANOL-WATER PARTITION COEFFICIENT OF GREATER THAN 3.0. THIS MATERIAL HAS AN ESTIMATED BIOCONCENTRATION FACTOR (BCF) OF GREATER THAN 100.

Other: ENVIRONMENTAL TOXICITY: NO INFORMATION FOUND.

XIII. DISPOSAL CONSIDERATIONS

Disposal Method: WHATEVER CANNOT BE SAVED FOR RECOVERY OR RECYCLING SHOULD BE MANAGED IN AN APPROPRIATE AND APPROVED WASTE DISPOSAL FACILITY. PROCESSING, USE OR CONTAMINATION OF THIS PRODUCT MAY CHANGE THE WASTE MANAGEMENT OPTIONS. STATE AND LOCAL DISPOSAL REGULATIONS MAY DIFFER FROM FEDERAL DISPOSAL REGULATIONS. DISPOSE OF CONTAINER AND UNUSED CONTENTS IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REQUIREMENTS.

XIV. TRANSPORT INFORMATION

D.O.T. Shipping Name: NOT REGULATED

XV. REGULATORY INFORMATION

TSCA Status: ON THE TSCA LISTED.

EPA Sara Title III Chemical Sections 311/312

Listings: ACUTE: YES
CHRONIC: NO
FIRE: NO
PRESSURE: NO
REACTIVITY: NO
(PURE / LIQUID)

Other: CHEMICAL INVENTORY STATUS – PART I
INGREDIENT: 9-OCTADECENOIC ACID, (Z) (112-80-1); TSCA: YES; EC: YES;
JAPAN: YES; AUSTRALIA: YES

CHEMICAL INVENTORY STATUS – PART 2
INGREDIENT: 9-OCTADECENOIC ACID, (Z) (112-80-1); KOREA: YES; CANADA
DSL/NDEL/PHIL: YES/NO/YES
INGREDIENT: 9-OCTADECENOIC ACID, (Z) (112-80-1); SARA 302 RQ / TPQ: NO /
NO
SARA 313 LIST / CHEMICAL CATG: NO / NO

FEDERAL , STATE & INTERNATIONAL REGULATIONS – PART I

INGREDIENT: 9-OCTADECENOIC ACID, (Z) (112-80-1); SARA 302 RQ / TPQ: NO /
NO
SARA 313 LIST / CHEMICAL CATG: NO / NO
FEDERAL , STATE & INTERNATIONAL REGULATIONS – PART II
CERCLA TCRA TSCS :

NO / NO / NO

CHEMICALS WEAPONS CONVENTION: NO

TSCA 12(B): NO

CDTA: NO

AUSTRALIAN HAZCHEM CODE: NONE ALLOCATED

POISON SCHEDULE: NONE ALLOCATED

WHMIS (CANADA): THIS MSDS HAS BEEN PREPARED ACCORDING TO THE HAZARD CRITERIA OF THE CONTROLLED PRODUCTS REGULATIONS (CPR) AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.

XVI. OTHER INFORMATION

WARRANTY INFORMATION

THIS INFORMATION IS OFFERED IN GOOD FAITH AS TYPICAL VALUES AND NOT AS A PRODUCT SPECIFICATION. NO WARRANTY, EXPRESSED OR IMPLIED, IS HEREBY MADE. THE RECOMMENDED INDUSTRIAL HYGIENE AND SAFE HANDLING PROCEDURES ARE BELIEVED TO BE GENERALLY APPLICABLE. HOWEVER, EACH USER SHOULD REVIEW THESE RECOMMENDATIONS IN THE SPECIFIC CONTEXT OF THE INTENDED USE AND DETERMINE WHETHER THEY ARE APPROPRIATE.