



SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Maleic Acid		DATE: August 01, 2011	
PRODUCT NUMBER: 1-2735 (1004095)			
TRADE NAME: Maleic Acid GENERAL USE: Fingerprint developer CHEMICAL FAMILY: Organic acid PRODUCT DESCRIPTION: White solid with faint, acidulous odor.			
MANUFACTURER: Safariland LLC		DATE PREPARED: August 1, 2011	
		SUPERSEDES: September 5, 2008	
ADDRESS (NUMBER, STREET, P.O. BOX): 13386 International Parkway		TELEPHONE NUMBER FOR INFORMATION / Customer Service: 800-347-1200	
(CITY, STATE AND ZIP CODE): Jacksonville, FL. 32218		COUNTRY: USA	
CHEMTEL 24-HOUR EMERGENCY TELEPHONE NUMBER			
		1-800-255-3924 01-813-248-0585 North America Toll Free International	

SECTION 2 - HAZARDOUS INGREDIENTS

Hazardous Components	% (by Weight)	CAS #	EINECS #	Hazard Symbol	RISK PHRASES (Full Text Section 15)
Maleic Acid	>95	110-16-7	203-742-5	Xn, Xi	R22, R36/37/38

Notes:

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
Product is an irritant to the eyes, skin, and respiratory tract. May cause burns. May be harmful if swallowed or absorbed through the skin. Product is corrosive.

POTENTIAL HEALTH EFFECTS

INHALATION:
 Inhaled dust is irritating to the mucous membranes and upper respiratory tract. Symptoms include coughing, sore throat, and wheezing, and shortness of breath.

SKIN:
 May cause irritation to skin. Symptoms include itching, redness, and pain. Product may be absorbed through the skin. Wet skin may exacerbate symptoms.

EYES:
 Severe irritation, redness and/or pain may occur with exposure. May cause burns or conjunctivitis.

INGESTION:
 Product is irritating to the gastro-intestinal tract. Nausea, gastro-intestinal distress, and vomiting may result. May cause irritation and burning of mouth, esophagus, throat, and stomach.

CARCINOGENICITY:

NTP? NO	IARC MONOGRAPHS? NO	OSHA REGULATED? NO
CALIFORNIA, Prop.65? NO		

SECTION 4 - FIRST AID MEASURES

INHALATION:
 Remove victim to fresh air, providing oxygen or artificial respiration if needed. Seek medical attention promptly.

EYES:
 Flush with water for 15 minutes. Seek emergency medical help.

SKIN:
 Rinse with copious amounts of water. Wash with soap and water and launder contaminated clothing before re-use.

INGESTION:
 Induce vomiting, if patient is conscious. Give large quantities of water to drink and call a physician immediately.

SECTION 5 - FIRE FIGHTING MEASURES

GENERAL HAZARDS:
 Fire is possible at elevated temperatures or ignition source, but flammability is low.

EXTINGUISHING MEDIA:
 Select media to combat surrounding fire.

FIRE FIGHTING PROCEDURES:
 Emergency responders should wear bunker gear and Self-Contained Breathing Apparatus (SCBA). Proper eye and skin protection should also be used. Water spray can be used to cool equipment and reduce vapors.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
 Ignition may produce corrosive and toxic fumes.

HAZARDOUS COMBUSTION PRODUCTS:
 Carbon Oxides and Sulfur Oxides.

MATERIAL SAFETY DATA SHEET

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SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
 Remove sources of ignition, then ventilate area. Wear appropriate personal protective equipment, then carefully clean up spill, using non-sparking tools and equipment. Moisten product with water to reduce the accumulation of dust in the air. Place material in marked container for disposal.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
 Do not store above 120°F. Keep away from light. Store in cool, dry ventilated area.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

HAZARDOUS COMPONENTS	NIOSH				ACGIH		OSHA	
	TWA ppm	TWA mg/m3	STEL ppm	STEL mg/m3	TLV/TWA ppm	TWA mg/m3	STEL ppm	PEL mg/m3
Maleic Acid	NE		NE		NE		NE	

PERSONAL PROTECTION

RESPIRATORY PROTECTION:
 Where ventilation is insufficient, used a OSHA/NIOSH or EU approved dust respirator.

PROTECTIVE GLOVES:
 Gloves are recommended for use of this product

EYE PROTECTION:
 Wear safety glasses or goggles as a matter of good laboratory practice while using product.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:
 Lab apron or coat is suggested.

WORK / HYGIENIC PRACTICES:
 Do not smoke, eat, or drink while using this product. Immediately wash hands after use. Avoid the formation of dust from product.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR White solid with faint, acidulous odor.	VAPOR PRESSURE
pH <7	SPECIFIC GRAVITY (WATER = 1) 1.59
BOILING POINT / BOILING RANGE 135°C (275°F) - DECOMPOSES	SOLUBILITY IN WATER Soluble
MELTING POINT 130-139°C (266-282°F)	VISCOSITY NA
FLAMMABLE LIMITS LEL: NE UEL: NE	VAPOR DENSITY (AIR = 1) 4
AUTO-IGNITION TEMPERATURE NE	EVAPORATION RATE (WATER = 1) NE

SECTION 10 - STABILITY AND REACTIVITY

STABILITY STABLE X	CONDITIONS TO AVOID: Excessive heat, acidic environments
INCOMPATIBILITY (MATERIALS TO AVOID): Strong Alkalis	
HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Sulfur and Carbon Oxides	
HAZARDOUS POLYMERIZATION: Will not occur.	CONDITIONS TO AVOID: None related to polymerization.

SECTION 11 - TOXICOLOGICAL INFORMATION

Hazardous Components	CAS # EINECS #	LD50 of Ingredient (Specify Species and Route)	LC50 of Ingredient (Specify Species)
Maleic Acid	110-16-7 203-742-5	Oral rat LD50: 708 mg/Kg	NE

SECTION 12 - ECOLOGICAL INFORMATION

TLm /Fathead minnow/5ppm/96 hr./fresh water
 TLm/Mosquito fish/240 ppm/24-48 hr./fresh water
 This material is not expected to bioaccumulate in soil or water; estimated bioconcentration factor should be less than 100.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:
 Dispose of product waste as well as containers in accordance with all local, state and federal regulations.

MATERIAL SAFETY DATA SHEET

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SECTION 14 - TRANSPORT INFORMATION

PROPER SHIPPING NAME: Maleic Acid	
DOT HAZARD CLASS / Pack Group: 8 / III REFERENCE: 49 CFR UN / NA IDENTIFICATION NUMBER: UN 2215 LABEL: Corrosive HAZARD SYMBOLS:	IMDG HAZARD CLASS: 8 RID/ADR Dangerous Goods Code: 8 UN TDG Class / Pack Group: 8 / III Hazard Identification Number (HIN): 80 IATA HAZARD CLASS / Pack Group: 100 kg limit on Cargo Only 8 / III 5 kg limit per package, 25kg max Aircraft on passenger aircraft,



Note: Transportation information provided is for reference only. Client is urged to consult CFR 49 parts 100 - 177, IMDG, IATA, EU, United Nations TDG, and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

SECTION 15 - REGULATORY INFORMATION

TSCA (USA - Toxic Substance Control Act):	Components Listed.
SARA TITLE III (USA - Superfund Amendments and Reauthorization Act):	NO
Acute Health: YES	Chronic Health: NO
Fire: NO	Sudden Release of Pressure: NO
Reactive: NO	
313 REPORTABLE INGREDIENTS:	No
CERCLA (USA - Comprehensive Response Compensation and Liability Act):	Not listed.
California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986:	Not listed.
State Right to Know: Maleic acid: MA, NJ, PA	
CPR (Canadian Controlled Products Regulations):	Not listed
IDL (Canadian Ingredient Disclosure List):	Listed.
DSL / NDSL (Canadian Domestic Substances List / Non-Domestic Substances List):	Components listed on DSL.
EINECS (European Inventory of Existing Commercial Chemical Substances):	Referenced.
WGK Water Quality Index:	2

RISK PHRASES:	SYMBOL(S) REQUIRED FOR EU LABEL	SAFETY PHRASES:
R22 : Harmful if swallowed. R36/37/38 : Irritating to eyes, respiratory system and skin.	 Xn/Xi - Harmful / Irritant	S2 : Keep out of the reach of children. S26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28 : After contact with skin, wash immediately with plenty of . . . (to be specified by the manufacturer). S37 : Wear suitable gloves.

SECTION 16 - OTHER INFORMATION

Legend: NA= Not applicable, NE= Not established, ND= Not determined.

HMIS HAZARD RATINGS	HEALTH: 2 FLAMMABILITY: 0 PHYSICAL HAZARD: 1 PERSONAL PROTECTIVE EQUIPMENT: B	0 = INSIGNIFICANT 1 = SLIGHT 2 = MODERATE 3 = HIGH 4 = EXTREME
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REVISION SUMMARY:
Revised to E.U. protocols 8/1/2011 supersedes 9/5/2008 issue.LB/JTV

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The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.