

REPORT NUMBER: 703
MSDS NO: P21543VS
MAINFRAME UPLOAD DATE: 10/23/03

UNIVAR USA INC.
MATERIAL SAFETY DATA SHEET

PAGE: 001
VERSION: 005

PRODUCT: MALEIC ANHYDRIDE

ORDER NO: 460706
PROD NO : 501791

CLARIANT LSM AMERICA INC
I-20 EXIT 87
2114 LARRY JEFFERS ROAD

ELGIN ,SC 29045

UNIVAR USA INC.
6100 CARILLON POINT , KIRKLAND

(425)889-3400
, WA 98033

----- EMERGENCY ASSISTANCE -----

FOR EMERGENCY ASSISTANCE INVOLVING CHEMICALS CALL - CHEMTREC
(800)424-9300

PRODUCT NAME: MALEIC ANHYDRIDE
MSDS NUMBER: P21543VS
EFFECTIVE DATE: 3/31/2003
SUPERSEDES: 8/22/2002
ISSUED BY: 003681

READ AND UNDERSTAND MATERIAL SAFETY DATA SHEET BEFORE HANDLING OR
DISPOSING OF PRODUCT

DATE ISSUED : 3/31/2003

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MATERIAL IDENTITY

MSDS CODE AND NAME

MANBRI MALEIC ANHYDRIDE

CHEMICAL NAME AND/OR FAMILY OR DESCRIPTION:

ACID ANHYDRIDE

COMPANY INFORMATION

HUNTSMAN PETROCHEMICAL CORPORATION

600 KELLWOOD PARKWAY, SUITE 220

CHESTERFIELD, MO 63017

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TELEPHONE NUMBERS

TRANSPORTATION EMERGENCY

COMPANY: (314) 205-3400
CHEMTREC: (800) 424-9300
MEDICAL EMERGENCY: (409) 722-9673 (24 HOUR)
GENERAL MSDS ASSISTANCE: (713) 235-6432
TECHNICAL INFORMATION: (850) 968-8698

2. COMPOSITION AND INFORMATION ON INGREDIENTS

THE CRITERIA FOR LISTING COMPONENTS IN THE COMPOSITION SECTION ARE AS FOLLOWS: CARCINOGENS ARE LISTED WHEN PRESENT AT 0.1 % OR GREATER; COMPONENTS WHICH ARE OTHERWISE HAZARDOUS ACCORDING TO OSHA ARE LISTED WHEN PRESENT AT 1.0 % OR GREATER; NON-HAZARDOUS COMPONENTS ARE LISTED AT 3.0 % OR GREATER. THIS IS NOT INTENDED TO BE COMPLETE COMPOSITIONAL DISCLOSURE. REFER TO SECTION 14 FOR APPLICABLE STATES' RIGHT TO KNOW AND OTHER REGULATORY INFORMATION.

PRODUCT AND/OR COMPONENT(S) CARCINOGENIC ACCORDING TO:

OSHA IARC NTP OTHER NONE X

COMPOSITION:

CHEMICAL NAME	CAS NUMBER	EXPOSURE LIMITS	RANGE IN
MALEIC ANHYDRIDE	108-31-6	0.1 PPM TWA-ACGIH 0.25 PPM TWA-OSHA	100.00 %

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW

APPEARANCE:

COLORLESS CRYSTALLINE NEEDLES, WHITE LUMPS OR PELLETS.

ODOR:

PUNGENT

WARNING STATEMENT

DANGER! CORROSIVE - CAUSES EYE AND SKIN BURNS

HARMFUL OR FATAL IF SWALLOWED

HARMFUL IF ABSORBED THROUGH SKIN

GRINDING MAY PRODUCE FLAMMABLE DUST/AIR MIXTURES

MOLTEN PRODUCT CAN CAUSE THERMAL BURNS

CAUSES RESPIRATORY TRACT IRRITATION AND CAN CAUSE DAMAGE

MAY CAUSE ALLERGIC SKIN AND RESPIRATORY-(ASTHMA-LIKE)-REACTION

HAZARDOUS MATERIAL INFORMATION SYSTEM(UNITED STATES)

HEALTH 3

FIRE 1

REACTIVITY 1

PERSONAL PROTECTION

NATIONAL FIRE PROTECTION ASSOCIATION NFPA (UNITED STATES)

HEALTH 3

FLAMMABILITY 1

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REACTIVITY SPECIFIC DANGER

POTENTIAL HEALTH EFFECTS

PRIMARY ROUTE OF EXPOSURE

EYE X SKIN X INHALATION X INGESTION X

EFFECTS OF OVEREXPOSURE

ACUTE:

EYES: CAUSES IRRITATION, EXPERIENCED AS PAIN, WITH EXCESS BLINKING AND TEAR PRODUCTION, AND SEEN AS EXTREME REDNESS AND SWELLING OF THE EYE AND CHEMICAL BURNS OF THE EYE.

SEVERE EYE DAMAGE MAY CAUSE BLINDNESS. EYE CONTACT WITH HOT OR MOLTEN PRODUCT CAN CAUSE EYE BURNS.

SKIN: CAUSES SEVERE IRRITATION WITH PAIN, SEVERE EXCESS REDNESS AND SWELLING WITH CHEMICAL BURNS, BLISTER FORMATION, AND POSSIBLE TISSUE DESTRUCTION. IN ADDITION TO THE POTENTIAL SKIN IRRITATION EFFECTS NOTED ABOVE, SKIN CONTACT MAY RESULT IN OTHER ADVERSE HEALTH EFFECTS. SKIN CONTACT WITH HOT OR MOLTEN PRODUCT CAN CAUSE SKIN BURNS.

INHALATION: DUST OR VAPOR CAUSES IRRITATION OF THE NOSE AND THROAT. RESPIRATORY IRRITATION MAY BE EXPERIENCED AS COUGHING, DIFFICULTY IN BREATHING, AND/OR NASAL DISCHARGE. PROLONGED OR REPEATED OVEREXPOSURE MAY RESULT IN THE ABSORPTION OF POTENTIALLY HARMFUL AMOUNTS OF MATERIAL. INGESTION: CAUSES BURNING OF MOUTH, THROAT, AND STOMACH WITH ABDOMINAL AND CHEST PAIN, NAUSEA, VOMITING, DIARRHEA, THIRST, WEAKNESS, AND COLLAPSE. ASPIRATION MAY OCCUR DURING SWALLOWING OR VOMITING, RESULTING IN LUNG DAMAGE.

SENSITIZATION PROPERTIES: INHALATION OF THIS PRODUCT MAY CAUSE AN ALLERGIC OR ASTHMA-LIKE REACTION, EXPERIENCED AS WHEEZING, COUGHING, INCREASED MUCUS PRODUCTION, TIGHTNESS IN THE CHEST, OR DIFFICULTY BREATHING IN SENSITIVE, EXPOSED PERSONS. PROLONGED AND REPEATED CONTACT WITH THIS PRODUCT MAY CAUSE AN ALLERGIC SKIN REACTION IN SENSITIVE, EXPOSED PERSONS.

THIS PRODUCT, OR A COMPONENT OF THIS PRODUCT, HAS BEEN CLASSIFIED AS A SKIN SENSITIZER BY ACGIH.

CHRONIC:

REPEATED INHALATION MAY CAUSE LUNG DAMAGE. REPEATED SKIN CONTACT MAY CAUSE A PERSISTENT IRRITATION OR DERMATITIS.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

OVEREXPOSURE TO VAPOR, DUST OR MIST MAY AGGRAVATE EXISTING RESPIRATORY CONDITIONS, SUCH AS ASTHMA, BRONCHITIS, AND INFLAMMATORY OR FIBROTIC RESPIRATORY DISEASE. SKIN CONTACT MAY AGGRAVATE AN EXISTING DERMATITIS (SKIN CONDITION).

OTHER REMARKS:

THIS PRODUCT OR A COMPONENT OF THIS PRODUCT MAY PRODUCE HAZY OR BLURRED VISION.

4. FIRST AID MEASURES

EYES:

IMMEDIATELY FLUSH EYES WITH LARGE AMOUNTS OF RUNNING WATER FOR AT LEAST 15

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MINUTES. HOLD EYELIDS APART WHILE FLUSHING TO RINSE ENTIRE SURFACE OF EYE AND LIDS WITH WATER. DO NOT ATTEMPT TO NEUTRALIZE WITH CHEMICAL AGENTS. OBTAIN MEDICAL ATTENTION IMMEDIATELY. CONTINUE FLUSHING FOR AN ADDITIONAL 15 MINUTES IF MEDICAL ATTENTION IS NOT IMMEDIATELY AVAILABLE.

SKIN:

IMMEDIATELY WIPE AWAY MATERIAL FROM SKIN WITH DRY CLOTH AND REMOVE CONTAMINATED CLOTHING AND SHOES. UNDER A SAFETY SHOWER, FLUSH AFFECTED AREAS THOROUGHLY WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. DO NOT ATTEMPT TO NEUTRALIZE WITH CHEMICAL AGENTS. GET MEDICAL ATTENTION IMMEDIATELY. DISCARD OR DECONTAMINATE CLOTHING AND SHOES BEFORE REUSE.

INGESTION:

IF PERSON IS CONSCIOUS AND CAN SWALLOW, IMMEDIATELY GIVE TWO GLASSES OF WATER (16 OZ.), BUT DO NOT INDUCE VOMITING.

THIS MATERIAL IS CORROSIVE. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. HAVE A PHYSICIAN DETERMINE IF CONDITION OF PATIENT WILL PERMIT INDUCTION OF VOMITING OR EVACUATION OF STOMACH. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON.

INHALATION:

IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING OR IN RESPIRATORY DISTRESS, CLEAR PERSON'S AIRWAY AND START ARTIFICIAL RESPIRATION. WITH A PHYSICIAN'S ADVICE, GIVE SUPPLEMENTAL OXYGEN USING A BAG-VALVE MASK OR MANUALLY TRIGGERED OXYGEN SUPPLY.

OTHER INSTRUCTIONS:

SWALLOWING OF THIS CORROSIVE MATERIAL MAY RESULT IN SEVERE ULCERATION, INFLAMMATION, AND POSSIBLE PERFORATION OF THE UPPER ALIMENTARY TRACT, WITH HEMORRHAGE AND FLUID LOSS. ASPIRATION OF THIS PRODUCT DURING INDUCED EMESIS CAN RESULT IN SEVERE LUNG INJURY. IF EVACUATION OF STOMACH IS NECESSARY, USE METHOD LEAST LIKELY TO CAUSE ASPIRATION, SUCH AS GASTRIC LAVAGE AFTER ENDOTRACHEAL INTUBATION. CONTACT A POISON CONTROL CENTER FOR ADDITIONAL TREATMENT INFORMATION.

INHALATION EXPOSURE MAY RESULT IN RESPIRATORY TRACT INJURY, THE DELAYED ONSET OF PULMONARY EDEMA, AND MAY PREDISPOSE PATIENT TO SECONDARY RESPIRATORY INFECTION. PERSONS EXPOSED TO HIGH CONCENTRATIONS SHOULD BE HOSPITALIZED FOR OBSERVATION. CONTACT A POISON CENTER FOR ADDITIONAL TREATMENT INFORMATION.

5. FIRE-FIGHTING MEASURES

IGNITION TEMPERATURE - AIT (DEGREES C):

476.7 (890 DEG F)

FLASH POINT (DEGREES C):

101.7 (215 DEG F) (PMCC)

FLAMMABLE LIMITS % (LOWER-UPPER):

LOWER: 1.4

UPPER: 7.1

RECOMMENDED FIRE EXTINGUISHING AGENTS AND SPECIAL PROCEDURES:

WATER SPRAY, FOAM OR CARBON DIOXIDE RECOMMENDED TO EXTINGUISH FLAMES.

NOTE: DO NOT USE DRY CHEMICAL. DRY CHEMICAL EXTINGUISHING AGENTS CAN REACT

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WITH MALEIC ANHYDRIDE TO PRODUCE LARGE VOLUMES OF GASSES THAT COULD RUPTURE EQUIPMENT NOT PROPERLY VENTED.

USE WATER SPRAY TO COOL ADJACENT FIRE-EXPOSED CONTAINERS. DO NOT USE SOLID WATER STREAMS NEAR RUPTURED TANKS OR SPILLS OF THIS MATERIAL - ACIDIC MATERIAL MAY REACT VIOLENTLY WITH WATER AND CAN SPATTER ONTO PERSONNEL. UNUSUAL OR EXPLOSIVE HAZARDS: UNSTABLE, OR AIR-REACTIVE OR WATER-REACTIVE CHEMICAL INVOLVED. (SEE SECTION 10.)

VAPORS FROM MELTED MATERIAL CAN BE IGNITED. KEEP MELTED MATERIAL AWAY FROM SPARKS, OPEN FLAMES, OR OTHER POSSIBLE IGNITION SOURCES.

THIS MATERIAL MAY FORM FLAMMABLE DUST-AIR MIXTURES WHEN FINELY DIVIDED. PREVENT DUST BUILDUP BY PROVIDING ADEQUATE VENTILATION DURING GRINDING OR MILLING OPERATIONS.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS:
WEAR SPECIAL CHEMICAL PROTECTIVE CLOTHING AND POSITIVE PRESSURE SELF-CONTAINED BREATHING APPARATUS. APPROACH FIRE FROM UPWIND TO AVOID HAZARDOUS VAPORS AND TOXIC DECOMPOSITION PRODUCTS. DECONTAMINATE OR DISCARD ANY CLOTHING THAT MAY CONTAIN CHEMICAL RESIDUES.

6. ACCIDENTAL RELEASE MEASURES (TRANSPORTATION SPILLS: CHEMTREC (800)424-9300)

PROCEDURES IN CASE OF ACCIDENTAL RELEASE, BREAKAGE OR LEAKAGE:
AVOID BREATHING DUST. PRESSURE DEMAND AIR SUPPLIED RESPIRATORS SHOULD ALWAYS BE WORN WHEN THE AIRBORNE CONCENTRATION OF THE CONTAMINANT OR OXYGEN IS UNKNOWN. OTHERWISE, WEAR RESPIRATORY PROTECTION AND OTHER PERSONAL PROTECTIVE EQUIPMENT AS APPROPRIATE FOR THE POTENTIAL EXPOSURE HAZARD. WEAR GLOVES, GOGGLES, AND PROTECTIVE CLOTHING TO AVOID CONTACT WITH EYES, SKIN, OR CLOTHING. USE VACUUMING OR SWEEPING COMPOUND FOR CLEAN-UP. DO NOT DRY SWEEP OR USE METHODS WHICH INCREASE DUSTING. PREVENT ENTRY INTO SEWERS AND WATERWAYS.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING:

EYE WASH AND SAFETY SHOWER SHOULD BE AVAILABLE NEARBY WHEN THIS PRODUCT IS HANDLED OR USED. MINIMUM FEASIBLE HANDLING TEMPERATURES SHOULD BE MAINTAINED. MATERIAL CAN BE AT ELEVATED TEMPERATURES AND/OR PRESSURES. EXERCISE CARE WHEN OPENING BLEEDERS AND SAMPLING PORTS. AVOID GENERATING MIST OR DUST.

STORAGE:

PERIODS OF EXPOSURE TO HIGH TEMPERATURES SHOULD BE MINIMIZED. WATER CONTAMINATION SHOULD BE AVOIDED.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
PROTECTIVE EQUIPMENT (TYPE)

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EYE/FACE PROTECTION:

AVOID EYE CONTACT. CHEMICAL TYPE GOGGLES WITH FACE SHIELD MUST BE WORN. DO NOT WEAR CONTACT LENSES.

SKIN PROTECTION:

PROTECTIVE CLOTHING SUCH AS COVERALLS OR LAB COATS MUST BE WORN. GLOVES RESISTANT TO CHEMICALS AND PETROLEUM DISTILLATES REQUIRED. WHEN HANDLING LARGE QUANTITIES, IMPERVIOUS SUITS, GLOVES, AND RUBBER BOOTS MUST BE WORN. REMOVE AND DRY-CLEAN OR LAUNDER CLOTHING SOAKED OR SOILED WITH THIS MATERIAL BEFORE REUSE. DRY CLEANING OF CONTAMINATED CLOTHING MAY BE MORE EFFECTIVE THAN NORMAL LAUNDERING. INFORM INDIVIDUALS RESPONSIBLE FOR CLEANING OF POTENTIAL HAZARDS ASSOCIATED WITH HANDLING CONTAMINATED CLOTHING.

RESPIRATORY PROTECTION:

AIRBORNE CONCENTRATIONS SHOULD BE KEPT TO LOWEST LEVELS POSSIBLE. IF VAPOR, MIST OR DUST IS GENERATED AND THE OCCUPATIONAL EXPOSURE LIMIT OF THE PRODUCT, OR ANY COMPONENT OF THE PRODUCT, IS EXCEEDED, USE APPROPRIATE NIOSH OR MSHA APPROVED AIR PURIFYING OR AIR SUPPLIED RESPIRATOR AFTER DETERMINING THE AIRBORNE CONCENTRATION OF THE CONTAMINANT. AIR SUPPLIED RESPIRATORS SHOULD ALWAYS BE WORN WHEN AIRBORNE CONCENTRATION OF THE CONTAMINANT OR OXYGEN CONTENT IS UNKNOWN.

VENTILATION:

ADEQUATE TO MEET OCCUPATIONAL EXPOSURE LIMITS (SEE BELOW).

EXPOSURE LIMIT FOR THE TOTAL PRODUCT:

MALEIC ANHYDRIDE: OSHA PEL-TWA 0.25 PPM; ACGIH TLV-TWA 0.1 PPM

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:

COLORLESS CRYSTALLINE NEEDLES, WHITE LUMPS OR PELLETS.

ODOR:

PUNGENT

BOILING POINT (DEGREES C):(

201.7 (395 DEG F)

MELTING/FREEZING POINT (DEGREES C):

52.8 (127 DEG F)

SPECIFIC GRAVITY (WATER=1):

1.48 AT 20/20 DEG C (SOLID)

PH:

<2 (ACIDIC)

VAPOR PRESSURE:

0.98 MMHG AT 40 DEG C (104 DEG F)

VISCOSITY:

NOT APPLICABLE.

VOC CONTENT:

NOT DETERMINED.

VAPOR DENSITY (AIR=1):

3.3

SOLUBILITY IN WATER (%):(

>10 (SOLUBLE)

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OTHER:
NONE

10. STABILITY AND REACTIVITY

THIS MATERIAL REACTS VIOLENTLY WITH:

AIR WATER X HEAT STRONG OXIDIZERS X OTHERS X NONE OF THESE

COMMENTS:

THIS MATERIAL MAY REACT VIOLENTLY WITH BASES, ALKALI METAL IONS AND AMINES. AT TEMPERATURES ABOVE 150 DEG C, THESE MATERIALS (AT CONCENTRATIONS AS LOW AS 200 PPM) CAN TRIGGER A RAPID DECOMPOSITION AND POLYMERIZATION REACTION WHICH WILL PRODUCE HEAT AND GAS AND MAY CAUSE EQUIPMENT TO RUPTURE.

PRODUCTS EVOLVED WHEN SUBJECTED TO HEAT OR COMBUSTION:

TOXIC LEVELS OF CARBON MONOXIDE, CARBON DIOXIDE, IRRITATING ALDEHYDES AND KETONES MAY BE FORMED ON BURNING. HEATING IN AIR MAY PRODUCE IRRITATING ALDEHYDES, ACIDS, AND KETONES.

HAZARDOUS POLYMERIZATIONS:

WILL NOT SELF-POLYMERIZE BUT CAN UNDERGO UNCONTROLLED CO-POLYMERIZATION IN PRESENCE OF OTHER MONOMERS AND CATALYSTS (SEE SECTION 10, COMMENTS).

11. TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION (ANIMAL TOXICITY DATA)

ORAL:

LD50 1.03 G/KG (RAT) MODERATELY TOXIC

INHALATION:

NOT DETERMINED.

DERMAL:

LD50 BELIEVED TO BE > .50 - 1.00 G/KG (RABBIT) MODERATELY TOXIC

IRRITATION INDEX, ESTIMATION OF IRRITATION (SPECIES)

SKIN:

(DRAIZE) BELIEVED TO BE > 6.50 - 8.00 /8.0 (RABBIT) CORROSIVE

EYES:

(DRAIZE) BELIEVED TO BE > 80.00 - 110.00 /110 (RABBIT) EXTREMELY IRRITATING

SENSITIZATION:

THE LIMITED NUMBER OF ANIMAL STUDIES INVESTIGATING THE DERMAL OR RESPIRATORY SENSITIZATION POTENTIAL OF MALEIC ANHYDRIDE HAVE NOT SHOWN CONCLUSIVE EVIDENCE OF SENSITIZATION POTENTIAL. ALTHOUGH THERE HAVE BEEN REPORTS OF HUMAN DERMAL OR RESPIRATORY SENSITIZATION FROM MALEIC ANHYDRIDE EXPOSURES, THE NUMBER OF REPORTS HAS BEEN LOW WHEN COMPARED TO THE NUMBER OF POTENTIALLY EXPOSED INDIVIDUALS. IT IS CONCLUDED THAT MALEIC ANHYDRIDE HAS A LOW POTENTIAL FOR HUMAN DERMAL OR RESPIRATORY SENSITIZATION.

OTHER:

NONE

12. DISPOSAL CONSIDERATIONS:

WASTE DISPOSAL METHODS:

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THIS PRODUCT (AS PRESENTLY CONSTITUTED) HAS THE RCRA CHARACTERISTICS OF CORROSIVITY, AND IS IDENTIFIED UNDER RCRA AS MALEIC ANHYDRIDE. IF DISCARDED IN ITS PRESENT FORM, IT WOULD HAVE HAZARDOUS WASTE NUMBERS D002 AND U147. UNDER RCRA, IT IS THE RESPONSIBILITY OF THE USER OF THE PRODUCT TO DETERMINE, AT THE TIME OF DISPOSAL, WHETHER THE PRODUCT MEETS RCRA CRITERIA FOR HAZARDOUS WASTE. THIS IS BECAUSE PRODUCT USES, TRANSFORMATIONS, MIXTURES, PROCESSES, ETC. MAY CHANGE THE CLASSIFICATION TO NON-HAZARDOUS, OR HAZARDOUS FOR REASONS OTHER THAN, OR IN ADDITION TO CORROSIVE AND MALEIC ANHYDRIDE.

REMARKS:

DO NOT ALLOW TO ENTER DRAINS OR SEWERS. DO NOT ALLOW TO DRAIN INTO SURFACE WATERS.

13. TRANSPORT INFORMATION
TRANSPORTATION

DOT:

PROPER SHIPPING NAME:

MALEIC ANHYDRIDE

HAZARD CLASS:

8

IDENTIFICATION NUMBER:

UN2215

PACKING GROUP:

III

LABEL REQUIRED:

CORROSIVE

DEPENDING ON CONTAINER SIZE, SPILLS OF THIS PRODUCT MAY REQUIRE REPORTING UNDER SARA 304 AND/OR CERCLA 102(A) REGULATIONS. PLEASE REFER TO SECTIONS 2 AND 14 OF MSDS FOR COMPOSITION AND COMPONENT RQ INFORMATION.

IMDG

PROPER SHIPPING NAME:

MALEIC ANHYDRIDE

HAZARD CLASS

8

IDENTIFICATION NUMBER

UN2215

PACKING GROUP

III

LABEL REQUIRED

CORROSIVE SUBSTANCES

ICAO

PROPER SHIPPING NAME:

MALEIC ANHYDRIDE

HAZARD CLASS

8

IDENTIFICATION NUMBER

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UN2215
PACKING GROUP
III
LABEL REQUIRED
CORROSIVE

TDG
PROPER SHIPPING NAME:
MALEIC ANHYDRIDE
HAZARD CLASS:
8
IDENTIFICATION NUMBER:
U N2215
PACKING GROUP:
III
LABEL REQUIRED:(
CORROSIVE

14. REGULATORY INFORMATION

FEDERAL REGULATIONS:

SARA TITLE III:

SECTION 302/304 EXTREMELY HAZARDOUS SUBSTANCES

CHEMICAL NAME	CAS NUMBER	RANGE IN %	TPQ	RQ
NONE.				

SECTION 311 HAZARDOUS CATEGORIZATION:

ACUTE X	CHRONIC X	FIRE	PRESSURE	REACTIVE X	N/A

SECTION 313 TOXIC CHEMICAL

CHEMICAL NAME	CAS NUMBER	CONCENTRATION
MALEIC ANHYDRIDE	108-31-6	100.00

CERCLA 102(A)/DOT HAZARDOUS SUBSTANCES:

CHEMICAL NAME	CAS NUMBER	RANGE IN %	RQ
MALEIC ANHYDRIDE	108-31-6	100.00	5000

STATES RIGHT-TO-KNOW REGULATIONS:

CHEMICAL NAME	STATE RIGHT-TO-KNOW
MALEIC ANHYDRIDE	CT, FL, IL, MA, NJ, PA, RI

CALIFORNIA PROP. 65:

THE FOLLOWING DETECTABLE COMPONENTS OF THIS PRODUCT ARE SUBSTANCES, OR BELONG TO CLASSES OF SUBSTANCES, KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND/OR REPRODUCTIVE TOXICITY.

CHEMICAL NAME	CAS NUMBER
NONE.	

INTERNATIONAL REGULATIONS:

TSCA INVENTORY STATUS:

THIS PRODUCT, OR ITS COMPONENTS, ARE LISTED ON, OR ARE EXEMPT FROM THE TOXIC SUBSTANCE CONTROL ACT (TSCA) CHEMICAL SUBSTANCE INVENTORY.

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WHMIS CLASSIFICATION:

CLASS D, DIV 1, SUBDIV B: TOXIC

CLASS D, DIV 2, SUBDIV A AND B: SKIN / RESPIRATORY SENSITIZER

CLASS E: CORROSIVE

CANADIAN INVENTORY STATUS:

THIS PRODUCT, OR ITS COMPONENTS, ARE LISTED ON OR ARE EXEMPT FROM THE CANADIAN DOMESTIC SUBSTANCE LIST (DSL).

EINECS INVENTORY STATUS:

THIS PRODUCT, OR ITS COMPONENTS, ARE LISTED ON OR ARE EXEMPT FROM THE EUROPEAN INVENTORY OF EXISTING CHEMICAL SUBSTANCES (EINECS) OR THE EUROPEAN LIST OF NOTIFIED CHEMICAL SUBSTANCES (ELINCS).

AUSTRALIAN INVENTORY STATUS:

THIS PRODUCT, OR ITS COMPONENTS, ARE LISTED ON OR ARE EXEMPT FROM THE AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES (AICS).

JAPAN INVENTORY STATUS:

THIS PRODUCT, OR ITS COMPONENTS, ARE LISTED ON OR ARE EXEMPT FROM THE JAPANESE MINISTRY OF INTERNATIONAL TRADE AND INDUSTRY (MITI) INVENTORY.

15. ENVIRONMENTAL INFORMATION

AQUATIC TOXICITY:

LC50-96HR 230.00 MG/LITER (MOSQUITO FISH) PRACTICALLY NONTOXIC

LC50-24HR 150.00 MG/LITER (BLUE GILL SUNFISH) PRACTICALLY NONTOXIC

MOBILITY:

NOT DETERMINED.

PERSISTENCE AND BIODEGRADABILITY:

THIS PRODUCT IS NOT EXPECTED TO BE PERSISTENT IN THE ENVIRONMENT. THIS PRODUCT IS ESTIMATED TO HAVE A MODERATE RATE OF BIODEGRADATION; GREATER THAN OR EQUAL TO 30% DEGRADATION OVER A TEST PERIOD OF 28 DAYS OR LESS. POTENTIAL TO BIOACCUMULATE:

THIS PRODUCT IS ESTIMATED TO HAVE A LOW POTENTIAL TO BIOCONCENTRATE.

REMARKS:

THIS PRODUCT READILY HYDROLYZES TO MALEIC ACID IN THE PRESENCE OF WATER.

16. OTHER INFORMATION 3/31/2003

HUNTSMAN RECOMMENDS THAT ALL EXPOSURES TO THIS PRODUCT BE MINIMIZED BY STRICTLY ADHERING TO RECOMMENDED OCCUPATIONAL CONTROLS PROCEDURES TO AVOID ANY POTENTIAL ADVERSE HEALTH EFFECTS.

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----- FOR ADDITIONAL INFORMATION -----

CONTACT: MSDS COORDINATOR UNIVAR USA INC.
DURING BUSINESS HOURS, PACIFIC TIME (425)889-3400
02/18/04 13:09 PRODUCT: 501791 CUST NO: 191866 ORDER NO: 460706

----- NOTICE -----

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HEREIN, AND SHALL UNDER NO CIRCUMSTANCES BE LIABLE FOR INCIDENTAL OR

CONSEQUENTIAL DAMAGES. **

DO NOT USE INGREDIENT INFORMATION AND/OR PERCENTAGES IN THIS MSDS AS A
PRODUCT SPECIFICATION. FOR PRODUCT SPECIFICATION INFORMATION REFER TO A PRODUCT
SPECIFICATION SHEET AND/OR A CERTIFICATE OF ANALYSIS. THESE CAN BE OBTAINED FROM
YOUR LOCAL UNIVAR SALES OFFICE.

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MANUFACTURER AND/OR RECOGNIZED TECHNICAL SOURCES. WHILE THE INFORMATION IS
BELIEVED TO BE ACCURATE, UNIVAR MAKES NO REPRESENTATIONS AS TO ITS ACCURACY OR
SUFFICIENCY. CONDITIONS OF USE ARE BEYOND UNIVARS CONTROL AND THEREFORE USERS
ARE RESPONSIBLE TO VERIFY THIS DATA UNDER THEIR OWN OPERATING CONDITIONS TO
DETERMINE WHETHER THE PRODUCT IS SUITABLE FOR THEIR PARTICULAR PURPOSES AND THEY
ASSUME ALL RISKS OF THEIR USE, HANDLING, AND DISPOSAL OF THE PRODUCT, OR FROM
THE PUBLICATION OR USE OF, OR RELIANCE UPON , INFORMATION CONTAINED HEREIN.
THIS INFORMATION RELATES ONLY TO THE PRODUCT DESIGNATED HEREIN, AND DOES NOT
RELATE TO ITS USE IN COMBINATION WITH ANY OTHER MATERIAL OR IN ANY OTHER
PROCESS.

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