


BARTEK Ingredients Inc.

A Taste for Today and Tomorrow

 BARTEK INGREDIENTS INC.
 421 SEAMAN STREET
 STONEY CREEK, ONTARIO, L8E 3J4
 CANADA
 905-662-3292

PRODUCT: MALEIC ANHYDRIDE
SECTION 01: IDENTIFICATION

PRODUCT IDENTIFIER..... MALEIC ANHYDRIDE
 OTHER MEANS OF IDENTIFICATION..... CIS-BUTENEDIOIC ANHYDRIDE.
 RECOMMENDED USE AND CHEMICAL SYNTHESIS, INTERMEDIATE.
 RESTRICTIONS ON USE
 SUPPLIER IDENTIFIER..... BARTEK INGREDIENTS INC.
 421 SEAMAN STREET
 STONEY CREEK
 ONTARIO
 CANADA
 L8E 3J4
 905-662-3292
 EMERGENCY PHONE NO..... CANUTEC (613)-996-6666 (24 HR).

SECTION 02: HAZARD IDENTIFICATION


HAZARD CLASSIFICATION..... ACUTE TOXICITY (ORAL) - CATEGORY 4. SKIN CORROSION - CATEGORY 1B. SERIOUS EYE DAMAGE - CATEGORY 1. RESPIRATORY SENSITIZATION - CATEGORY 1. SKIN SENSITIZATION - CATEGORY 1. ACUTE AQUATIC TOXICITY - CATEGORY 3.

SIGNAL WORD..... DANGER.

HAZARD STATEMENT..... H302 HARMFUL IF SWALLOWED. H314 CAUSES SEVERE SKIN BURNS AND EYE DAMAGE. H317 MAY CAUSE AN ALLERGIC SKIN REACTION. H318 CAUSES SERIOUS EYE DAMAGE. H334 MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED. H402 HARMFUL TO AQUATIC LIFE.

PRECAUTIONARY STATEMENT..... P260 DO NOT BREATHE DUST/FUME/GAS/MIST/VAPOURS/SPRAY. P264 WASH SKIN THOROUGHLY AFTER HANDLING. P270 DO NOT EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT. P272 CONTAMINATED WORK CLOTHING SHOULD NOT BE ALLOWED OUT OF THE WORKPLACE. P273 AVOID RELEASE TO THE ENVIRONMENT. P280 WEAR PROTECTIVE GLOVES/PROTECTIVE CLOTHING/EYE PROTECTION/FACE PROTECTION. P285 IN CASE OF INADEQUATE VENTILATION WEAR RESPIRATORY PROTECTION. P301+P312+P330 IF SWALLOWED: CALL A POISON CENTER OR DOCTOR/PHYSICIAN IF YOU FEEL UNWELL. RINSE MOUTH. P331 DO NOT INDUCE VOMITING. P303+P361+P353 IF ON SKIN (OR HAIR): REMOVE/TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/SHOWER. P304+P340+P310 IF INHALED: REMOVE VICTIM TO FRESH AIR AND KEEP AT REST IN A POSITION COMFORTABLE FOR BREATHING. IMMEDIATELY CALL A POISON CENTER OR DOCTOR/PHYSICIAN. P305+P351+P338+P310 IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING. IMMEDIATELY CALL A POISON CENTER OR DOCTOR/PHYSICIAN. P333+P313 IF SKIN IRRITATION OR RASH OCCURS: GET MEDICAL ADVICE/ATTENTION. P342+P311 IF EXPERIENCING RESPIRATORY SYMPTOMS: CALL A POISON CENTER OR DOCTOR/PHYSICIAN. P363 WASH CONTAMINATED CLOTHING BEFORE REUSE. P405 STORE LOCKED UP. P501 DISPOSE OF CONTENTS/CONTAINER TO APPROPRIATE WASTE SITE OR RECLAIMER IN ACCORDANCE WITH LOCAL AND NATIONAL REGULATIONS.

HAZARDS NOT OTHERWISE CLASSIFIED (HNOC) OR NOT COVERED BY GHS: NONE.

SECTION 03: COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	CAS #	WT. %
MALEIC ANHYDRIDE	108-31-6	>99.5

PRODUCT: MALEIC ANHYDRIDE**SECTION 04: FIRST AID MEASURES**

INHALATION.....	ALLOW THE VICTIM TO REST IN A WELL VENTILATED AREA. SEEK IMMEDIATE MEDICAL ATTENTION.
EYE CONTACT.....	IMMEDIATELY FLUSH WITH WATER FOR AT LEAST 15 MINUTES, KEEPING EYELIDS OPEN. SEEK MEDICAL ATTENTION.
SKIN CONTACT.....	AFTER CONTACT WITH SKIN, WASH IMMEDIATELY WITH PLENTY OF WATER. IF IRRITATION PERSISTS SEEK MEDICAL ATTENTION. WASH CONTAMINATED CLOTHING BEFORE REUSING.
INGESTION.....	DO NOT INDUCE VOMITING. HAVE A CONSCIOUS PERSON DRINK SEVERAL GLASSES OF WATER OR MILK. SEEK IMMEDIATE MEDICAL ATTENTION.
MOST IMPORTANT SYMPTOMS AND EFFECTS, ACUTE OR DELAYED: INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED	SEE SECTION 11.

SECTION 05: FIRE FIGHTING MEASURES

FLAMMABILITY.....	NOT COMBUSTIBLE/NOT FLAMMABLE.
EXTINGUISHING MEDIA.....	SMALL FIRE: CARBON DIOXIDE, WATER, FOAM. LARGE FIRE: WATER SPRAY, FOG OR FOAM, DO NOT USE WATER JET. DO NOT USE DRY CHEMICAL: LARGE VOLUMES OF GASES COULD BE PRODUCED BY REACTION WITH MALEIC ANHYDRIDE.
HAZARDOUS COMBUSTION PRODUCTS. SPECIAL HAZARDS ARISING FROM THE PRODUCT:	CARBON DIOXIDE, CARBON MONOXIDE. UNSTABLE, OR AIR-REACTIVE OR WATER-REACTIVE CHEMICAL INVOLVED (SEE SECTION 10). VAPORS FROM MELTED MATERIAL CAN BE IGNITED. KEEP MELTED MATERIAL AWAY FROM IGNITION SOURCES. MAY FORM FLAMMABLE DUST-AIR MIXTURES WHEN FINELY DIVIDED. PREVENT DUST BUILDUP BY PROVIDING ADEQUATE VENTILATION DURING GRINDING OR MILLING OPERATIONS.
SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS:	WEAR SELF-CONTAINED BREATHING APPARATUS WITH FULL FACE PIECE OPERATED IN THE POSITIVE PRESSURE DEMAND MODE AND FULL BODY PROTECTION WHEN FIGHTING FIRES.

SECTION 06: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS.....	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.
ENVIRONMENTAL PRECAUTIONS.....	PREVENT ENTRY INTO SEWERS AND WATERWAYS.
METHODS FOR CONTAINMENT.....	CONTAIN THE DISCHARGED MATERIAL.
METHODS FOR CLEANING UP.....	USE APPROPRIATE TOOLS TO PUT THE SPILLED SOLID IN A WASTE DISPOSAL CONTAINER. IF NECESSARY, NEUTRALIZE THE RESIDUE WITH A DILUTE SOLUTION OF SODIUM HYDROXIDE. DO NOT DRY SWEEP OR USE METHODS THAT INCREASE DUSTING.

SECTION 07: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING:.....	MINIMUM FEASIBLE HANDLING TEMPERATURES SHOULD BE MAINTAINED. AVOID GENERATING MIST OR DUST. EXERCISE CARE WHEN OPENING BLEEDERS AND SAMPLING PORTS. DO NOT BREATHE GAS, FUMES, VAPOR OR SPRAY. DO NOT INGEST. AVOID CONTACT WITH SKIN AND EYES. AFTER HANDLING, ALWAYS WASH HANDS THOROUGHLY WITH SOAP AND WATER.
CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:	STORE AWAY FROM INCOMPATIBLE MATERIALS. STORE AT TEMPERATURES NOT EXCEEDING 70°C (158°F). CONTAINS MOISTURE SENSITIVE MATERIAL - STORE IN A DRY PLACE.

SECTION 08: EXPOSURE CONTROLS AND PERSONAL PROTECTION

INGREDIENTS	TWA	ACGIH TLV STEL	PEL	OSHA PEL STEL	REL	NIOSH
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MALEIC ANHYDRIDE	0.1 PPM	N.AV.	TWA: 0.25 PPM 8H; 1 MG/M3 8H.	N.AV.	N.AV.	N.AV.
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APPROPRIATE ENGINEERING CONTROLS ADEQUATE TO MEET OCCUPATIONAL EXPOSURE LIMITS.
INDIVIDUAL PROTECTION MEASURE
SUCH AS PERSONAL PROTECTIVE
EQUIPMENTS:

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

PRODUCT: MALEIC ANHYDRIDE**SECTION 08: EXPOSURE CONTROLS AND PERSONAL PROTECTION**

HAND PROTECTION.....	GLOVES RESISTANT TO CHEMICALS AND PETROLEUM DISTILLATES REQUIRED.
RESPIRATORY PROTECTION.....	IF DUST IS GENERATED AND THE OCCUPATIONAL EXPOSURE LIMIT 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.
PROTECTIVE CLOTHING.....	PROTECTIVE CLOTHING SUCH AS COVERALLS OR LAB COATS MUST BE WORN. WHEN HANDLING LARGE QUANTITIES, IMPERVIOUS SUITS, GLOVES, AND RUBBER BOOTS MUST BE WORN. REMOVE AND DRY-CLEAN OR LAUNDRER CLOTHING SOAKED OR SPOILED WITH THIS MATERIAL BEFORE REUSE. DRY CLEANING OF CONTAMINATED CLOTHING MAY BE MORE EFFECTIVE THAN NORMAL LAUNDRING. INFORM INDIVIDUALS RESPONSIBLE FOR CLEANING OF POTENTIAL HAZARDS ASSOCIATED WITH HANDLING CONTAMINATED CLOTHING.
PROTECTIVE FOOTWEAR.....	SEE ABOVE.
OTHER.....	EYE WASH AND SAFETY SHOWER SHOULD BE AVAILABLE NEARBY WHEN THIS PRODUCT IS HANDLED OR USED. WASH HANDS BEFORE CONSUMPTION OF FOOD OR DRINK.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE.....	MOLTEN LIQUID.
ODOUR.....	STRONG IRRITATING ACRID ODOUR.
ODOUR THRESHOLD.....	0.5 PPM.
COLOR.....	WATER-WHITE.
PH.....	2.42 (0.1 M SOLUTION).
BOILING POINT.....	202 C (395 F).
MELTING/FREEZING POINT.....	52.5 C (126.5 F).
FLASH POINT (C), METHOD.....	102°C (215°F) (PMCC).
EVAPORATION RATE.....	N.A.P.
FLAMMABILITY (SOLIDS AND GASES).....	N.A.V.
UPPER FLAMMABLE LIMIT (% BY VOL.)...	7.1.
LOWER FLAMMABLE LIMIT (% BY VOL.)...	1.4.
VAPOUR PRESSURE (MMHG).....	0.2 MM HG AT 25°C.
VAPOUR DENSITY (AIR=1).....	3.38.
BY VOLUME	
BY WEIGHT	
RELATIVE DENSITY.....	MOLTEN: 1.3 AT 70 (C).
SOLUBILITY IN WATER (% W/W).....	VERY SOLUBLE (40GM/100ML).
COEFFICIENT OF WATER/OIL DIST.....	N.A.V.
AUTO IGNITION TEMPERATURE.....	477°C (890°F).
DECOMPOSITION TEMPERATURE.....	N.A.V.
VISCOSITY.....	N.A.V.

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY:.....	WILL NOT SELF-POLYMERIZE BUT CAN UNDERGO UNCONTROLLED CO-POLYMERIZATION IN THE PRESENCE OF OTHER MONOMERS AND CATALYSTS (SEE INCOMPATIBLE MATERIALS).
CHEMICAL STABILITY:.....	STABLE EXCEPT WHEN IN CONTACT WITH WATER.
POSSIBILITY OF HAZARDOUS REACTIONS:.....	UNDER NORMAL CONDITIONS OF STORAGE AND USE, HAZARDOUS REACTIONS WILL NOT OCCUR.
CONDITIONS TO AVOID:.....	CONTACT WITH INCOMPATIBLES. MOISTURE.
INCOMPATIBLE MATERIALS:.....	MAY REACT VIOLENTLY WITH AMINES, ALKALI METAL IONS SUCH AS SODIUM OR POTASSIUM, AND BASES. AT TEMPERATURES ABOVE 150°C, THESE MATERIALS, AT CONCENTRATIONS AS LOW AS 200 PPM., CAN TRIGGER A RAPID DECOMPOSITION AND POLYMERIZATION REACTION THAT WOULD PRODUCE HEAT AND GAS AND CAUSE EQUIPMENT TO RUPTURE.
HAZARDOUS PRODUCTS OF DECOMPOSITION.....	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.

SECTION 11: TOXICOLOGICAL INFORMATION

INGREDIENTS	LC50	LD50
MALEIC ANHYDRIDE	SEE BELOW	LD50 (ORAL, RAT): 1030 MG/KG; LD50 (DERMAL, RABBIT): 2620 MG/KG.

INFORMATION ON LIKELY ROUTES OF ENTRY:

PRODUCT: MALEIC ANHYDRIDE**SECTION 11: TOXICOLOGICAL INFORMATION**

SKIN CONTACT.....	CAUSES SKIN BURNS. HARMFUL IF ABSORBED THROUGH SKIN.
EYE CONTACT.....	CAUSES EYE BURNS.
INHALATION.....	CAUSES RESPIRATORY TRACT IRRITATION AND CAN CAUSE DAMAGE.
INGESTION.....	HARMFUL OR FATAL IF SWALLOWED.
INFORMATION ON TOXICOLOGICAL EFFECTS:	
EFFECTS OF ACUTE EXPOSURE.....	CORROSIVE. MOLTEN PRODUCT CAN CAUSE THERMAL BURNS. EXTREMELY DANGEROUS IN CASE OF SKIN CONTACT (CORROSIVE, IRRITANT), OF EYE CONTACT (IRRITANT) AND INHALATION. VERY DANGEROUS IN CASE OF INGESTION. SLIGHTLY DANGEROUS IN CASE OF SKIN CONTACT (SENSITIZER). EYE CONTACT CAN RESULT IN CORNEAL DAMAGE OR BLINDNESS. INHALATION OF DUST WILL PRODUCE IRRITATION TO GASTRO-INTESTINAL OR RESPIRATORY TRACT, CHARACTERIZED BY BURNING, SNEEZING AND COUGHING.
EFFECTS OF CHRONIC EXPOSURE.....	MAY CAUSE ALLERGIC SKIN AND RESPIRATORY (ASTHMA LIKE) REACTION. REPEATED EXPOSURE OF THE EYES TO LOW LEVEL DUST CAN PRODUCE IRRITATION. REPEATED SKIN EXPOSURE CAN CAUSE LOCAL SKIN DESTRUCTION OR DERMATITIS. REPEATED INHALATION CAN CAUSE A VARYING DEGREE OF RESPIRATORY IRRITATION OR LUNG DAMAGE. REPEATED EXPOSURE TO A HIGHLY TOXIC MATERIAL MAY PRODUCE GENERAL DETERIORATION OF HEALTH BY ACCUMULATION IN ONE OR MANY HUMAN ORGANS.
INHALATION, CHRONIC.....	N.A.V.
CARCINOGENICITY OF MATERIAL.....	IARC: NOT LISTED.
REPRODUCTIVE EFFECTS.....	N.A.V.
SENSITIZING CAPABILITY OF MATERIAL	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. MALEIC ANHYDRIDE HAS A LOW POTENTIAL FOR HUMAN DERMAL OR RESPIRATORY SENSITIZATION.
SYNERGISTIC MATERIALS.....	N.A.V.
LC 50 OF MATERIAL, SPECIES & ROUTE.	MALEIC ANHYDRIDE: TCLO (INHALATION, RODENT - RAT): 9800 UG/M3/6H/26W-I. REFERENCE: FAATDF FUNDAMENTAL AND APPLIED TOXICOLOGY. (ACADEMIC PRESS, INC., 1 E. FIRST ST., DULUTH, MN 55802) V.1-1981-VOLUME(ISSUE)/PAGE/YEAR: 10,517,1988.

SECTION 12: ECOLOGICAL CONSIDERATIONS

BIOACCUMULATIVE POTENTIAL.....	THIS PRODUCT IS NOT EXPECTED TO BIOACCUMULATE THROUGH FOOD CHAINS IN THE ENVIRONMENT.
AQUATIC TOXICITY.....	LC50 - 96HR 230 MG/LITER (MOSQUITO FISH) PRACTICALLY NONTOXIC. LC50 - 24HR 150 MG/LITER (BLUE GILL SUNFISH) PRACTICALLY NONTOXIC. THIS PRODUCT WILL HYDROLYZE RAPIDLY TO THE ACID. EXPECTED TO BE SLIGHTLY TOXIC TO AQUATIC SPECIES BECAUSE OF ACIDITY.
MOBILITY.....	THIS PRODUCT IS NOT LIKELY TO VOLATILIZE RAPIDLY INTO THE AIR BECAUSE OF ITS LOW VAPOUR PRESSURE.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS:..... DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION 14: TRANSPORT INFORMATION

CANADA:	
TDG CLASSIFICATION:.....	8.
USA:	
D.O.T. CLASSIFICATION:.....	8.
PROPER SHIPPING NAME.....	MALEIC ANHYDRIDE.
UN NUMBER.....	2215.
PACKING GROUP.....	III.
ENVIRONMENTAL HAZARDS ACCORDING TO THE INTERNATIONAL MARITIME DANGEROUS GOODS CODE AND THE UNITED NATIONS MODEL REGULATIONS:	N.A.V.
SPECIAL INSTRUCTIONS:.....	U.S. D.O.T. REPORTABLE QUANTITY: 5000 LBS. (2268 KG).

PRODUCT: MALEIC ANHYDRIDE

SECTION 15: REGULATORY INFORMATION

SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS SPECIFIC TO THE PRODUCT: N.AV.

US REGULATIONS:

TSCA INVENTORY:..... LISTED.

SARA TITLE III:..... SECTION 302: THIS PRODUCT IS NOT REGULATED UNDER SECTION 302 OF SARA AND 40CFR PART 355. SECTION 311: MALEIC ANHYDRIDE, IMMEDIATE (ACUTE) HEALTH HAZARD, DELAYED (CHRONIC) HEALTH HAZARD. SECTION 313: MALEIC ANHYDRIDE 100%.

CERCLA 102 A:..... MALEIC ANHYDRIDE 100%, RQ 5000 LBS.

STATE REGULATIONS:..... PENNSYLVANIA RTK: MALEIC ANHYDRIDE (ENVIRONMENTAL HAZARD, GENERIC ENVIRONMENTAL HAZARD). MASSACHUSETTS RTK: MALEIC ANHYDRIDE. NEW JERSEY RTK: MALEIC ANHYDRIDE. CONNECTICUT RTK: MALEIC ANHYDRIDE. FLORIDA RTK: MALEIC ANHYDRIDE. ILLINOIS RTK: MALEIC ANHYDRIDE. RHODE ISLAND RTK: MALEIC ANHYDRIDE. CALIFORNIA PROP. 65: NO PRODUCTS WERE FOUND.

SECTION 16: OTHER INFORMATION

ADDITIONAL INFORMATION..... BARTEK INGREDIENTS INC. CANNOT ANTICIPATE ALL CONDITIONS UNDER WHICH THIS INFORMATION AND ITS PRODUCT, OR THE PRODUCTS OF OTHER MANUFACTURERS IN COMBINATION WITH ITS PRODUCT, MAY BE USED. IT IS THE USERS' RESPONSIBILITY TO ENSURE SAFE CONDITIONS FOR HANDLING, STORAGE AND DISPOSAL OF THE PRODUCT, AND TO ASSUME LIABILITY FOR LOSS, INJURY, DAMAGE OR EXPENSE DUE TO IMPROPER USE. THIS INFORMATION IS GIVEN IN GOOD FAITH, BUT NO WARRANTY, EXPRESS OR IMPLIED IS MADE.

N.AP.=NOT APPLICABLE

N.AV.=NOT AVAILABLE

PREPARED BY..... REGULATORY AFFAIRS.

PREPARATION DATE..... SEP 25/2015