

SECTION 1 MARCUS PRODUCTS COMPANY

PRODUCT: MARCUS BLEND EG/DI WATER

PRODUCT CODE: MAR EG/DI 30/70

SECTION 2 **PRODUCT/INGREDIENTS**

CAS#	CONCENTRATION	INGREDIENTS
ANTIFREEZE/COOLANT		
107-21-1	30%	ETHYLENE GLYCOL
7732-18-5	70%	DEIONIZED WATER

SECTION 3 **HAZARDS IDENTIFICATION**

EMERGENCY OVERVIEW

APPEARANCE & ODOR: CLEAR LIQUID MILD ODOR.

HEALTH HAZARDS: MAY BE HARMFUL OR FATAL IF SWALLOWED. DO NOT INDUCE VOMITING.

NFPA RATING: (HEALTH, FIRE, REACTIVITY): 2,1,0

HAZARD RATING: LEAST-0 SLIGHT-1 MODERATE-2 HIGH-3 EXTREME-4

INHALATION: IN APPLICATIONS WHERE VAPORS CAUSED BY HIGH TEMPERATURES OR MISTS, BREATHING MAY CAUSE A MILD BURNING SENSATION IN THE NOSE, THROAT, AND LUNGS.

EYE IRRITATION: MAY CAUSE SLIGHT IRRITATION OF THE EYES. IF IRRITATION OCCURS, A TEMPORARY BURNING SENSATION, MINOR REDNESS, SWELLING, AND/OF BLURRED VISION MAY RESULT.

SKIN CONTACT: MAY CAUSE SLIGHT IRRITATION OF THE SKIN. IF IRRITATION OCCURS, A TEMPORARY BURNING SENSATION AND MINOR REDNESS AND/OR SWELLING MAY RESULT. OTHER ADVERSE EFFECTS NOT EXPECTED FROM BRIEF SKIN CONTACT.

INGESTION: THIS MATERIAL MAY BE HARMFUL OR FATAL IF SWALLOWED. INGESTION MAY RESULT IN VOMITING; ASPIRATION (BREATHING) OF VOMITUS INTO LUNGS MUST BE AVOIDED AS EVEN SMALL QUANTITIES MAY RESULT IN ASPIRATION PNEUMONITIS. CONTAINS ETHYLENE GLYCOL AND/OR DIETHYLENE GLYCOL WHICH ARE TOXIC WHEN SWALLOWED. A LETHAL DOSE FOR AN ADULT IS 1 ML PER KILOGRAM OR ABOUT 4 OUNCES. SEVERE KIDNEY DAMAGE CAN OCCUR AS A RESULT OF INGESTION. MAY CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION.

SECTION 4 **FIRST AID MEASURES**

INHALATION: IF THE VICTIM HAS DIFFICULTY BREATHING OR TIGHTNESS OF THE CHEST, IS DIZZY, VOMITING OR UNRESPONSIVE, GIVE 100% OXYGEN WITH RESCUE BREATHING OR CPR AS REQUIRED AND TRANSPORT TO THE NEAREST MEDICAL FACILITY.

SKIN: FLUSH EXPOSED AREA WITH WATER AND FOLLOW BY WASHING WITH SOAP IF AVAILABLE. IF REDNESS, SWELLING, PAIN, AND/OR BLISTERS OCCUR, TRANSPORT TO THE NEAREST MEDICAL FACILITY FOR ADDITIONAL TREATMENT.

EYE: FLUSH EYES WITH PLENTY OF WATER WHILE HOLDING EYELIDS OPEN. REST EYE: FOR 30 MINUTES. IF REDNESS, SWELLING, BURNING, BLURRED VISION OCCURS TRANSPORT TO THE NEAREST MEDICAL FACILITY.

INGESTION: DO NOT TAKE INTERNALLY. DO NOT INDUCE VOMITING. IF VOMITING OCCURS SPONTANEOUSLY, KEEP HEAD BELOW HIPS TO PREVENT ASPIRATION OF LIQUID INTO THE LUNGS. GET MEDICAL ATTENTION.

SECTION 5 **FIRE FIGHTING MEASURES**

FLASH POINT [METHOD] > 239 F/115 C [CLEVELAND OPEN CUP]

EXTINGUISHING MEDIA: USE WATER FOG, ALCOHOL FOAM, DRY CHEMICAL OR CARBON DIOXIDE TO EXTINGUISH FLAMES. DO NOT USE A DIRECT STREAM OF WATER.

FIRE FIGHTING INSTRUCTIONS: MATERIAL WILL NOT BURN UNLESS PREHEATED. DO NOT ENTER CONFINED FIRE SPACE WITH FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS), INCLUDING A POSITIVE PRESSURE, NIOSH APPROVED, SELF-CONTAINED BREATHING APPARATUS.

SECTION 6 **ACCIDENTAL RELEASE MEASURES**

PROTECTIVE MEASURES: MAY BURN BUT NOT READILY IGNITABLE. WEAR APPROPRIATE PERSONAL EQUIPMENT WHEN CLEANING UP SPILLS.

SPILL MANAGEMENT: SHUT OFF SOURCE OF LEAK IF IT IS SAFE TO DO SO. DIKE AND CONTAIN THE SPILL. FOR LARGE SPILLS, REMOVE WITH A VACUUM TRUCK OR PUMP TO STORAGE/SALVAGE VESSELS. FOR SMALL SPILLS, SOAK UP RESIDUE WITH ABSORBENT SUCH AS CLAY, SAND, OR OTHER SUITABLE MATERIAL. PLACE IN NON-LEAKING CONTAINERS AND SEAL TIGHTLY FOR PROPER DISPOSAL.

SECTION 7 **HANDLING AND STORAGE**

PRECAUTIONARY MEASURES: AVOID HEAT, OPEN FLAMES, INCLUDING PILOT LIGHTS, AND STRONG OXIDIZING AGENTS. USE EXPLOSION - PROOF VENTILATION TO PREVENT VAPOR ACCUMULATION. GROUND ALL HANDLING EQUIPMENT TO PREVENT SPARKING. AVOID CONTACT WITH EYES, SKIN, AND CLOTHING. WASH THOROUGHLY AFTER HANDLING.

STORAGE: STORE IN A COOL, DRY PLACE WITH ADEQUATE VENTILATION. KEEP AWAY FROM OPEN FLAMES AND HIGH TEMPERATURES.

CONTAINER WARNINGS: KEEP CONTAINERS CLOSED WHEN NOT IN USE. CONTAINERS, EVEN THOSE THAT HAVE BEEN EMPTIED, CAN CONTAIN EXPLOSIVE VAPORS. DO NOT CUT, DRILL, GRIND, WELD, OR PERFORM SIMILAR OPERATIONS ON OR NEAR CONTAINERS.

SECTION 8 **EXPOSURE CONTROLS/PERSONAL PROTECTION**

ETHYLENE GLYCOL ACGIH TLV CEILING: 100 mg/m³
ETHYLENE GLYCOL OSHA PEL - 1989 (revoked) CEILING: 50 PPMV

EXPOSURE CONTROLS: ADEQUATE VENTILATION TO CONTROL AIRBORNE CONCENTRATIONS BELOW THE EXPOSURE GUIDELINES/LIMITS. EYE WASHES AND SHOWERS FOR EMERGENCY USE.

PERSONAL PROTECTION: PERSONAL PROTECTIVE EQUIPMENT SELECTION VARY BASED ON POTENTIAL EXPOSURE CONDITIONS SUCH AS HANDLING PRACTICES, CONCENTRATION AND VENTILATION. INFORMATION ON THE SELECTION OF EYE, SKIN AND RESPIRATORY PROTECTION FOR USE WITH THIS MATERIAL IS PROVIDED BELOW.

EYE PROTECTION: CHEMICAL GOGGLES - IF LIQUID CONTACT IS LIKELY, OR SAFETY GLASSES WITH SIDE SHIELDS.

SKIN PROTECTION: USE PROTECTION CLOTHING WHICH IS CHEMICALLY RESISTANT TO THIS MATERIAL. SELECTION OF PROTECTIVE CLOTHING DEPENDS ON POTENTIAL EXPOSURE CONDITIONS AND MAY INCLUDE GLOVES, BOOTS, SUITS AND OTHER ITEMS. THE SELECTION SHOULD TAKE INTO ACCOUNT SUCH FACTORS AS JOB TASK, TYPE OF EXPOSURE AND DURABILITY REQUIREMENTS.

PUBLISHED LITERATURE: TEST DATA AND/OR GLOVE AND CLOTHING MANUFACTURERS INDICATE THE BEST PROTECTION IS PROVIDED BY NEOPRENE OR NITRIL RUBBER.

RESPIRATORY PROTECTION: IF ENGINEERING CONTROLS DO NOT MAINTAIN AIRBORNE CONCENTRATIONS TO THE LEVEL WHICH IS ADEQUATE TO PROTECT WORKER HEALTH, AN APPROVED RESPIRATOR MUST BE WORN. RESPIRATOR SELECTION, USE AND MAINTENANCE SHOULD BE IN ACCORDANCE WITH THE REQUIREMENTS OF ASHA RESPIRATORY PROTECTION STANDARD, 39 CFR 1910.134

SECTION 9 **PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE & ODOR: CLEAR LIQUID, MILD ODOR

SUBSTANCE CHEMICAL FAMILY: ETHYLENE GLYCOLS

FLASH POINT: > 239F [CLEVELAND OPEN CUP]
BOILING POINT: 388F
ODOR: MILD
pH: 10.2-11
SPECIFIC GRAVITY: 1.03

SECTION 10 **REACTIVITY AND STABILITY**

MATERIALS TO AVOID: AVOID CONTACT WITH STRONG OXIDIZING AGENTS

HAZARDOUS DECOMPOSITION PRODUCTS: THERMAL DECOMPOSITION PRODUCTS ARE HIGHLY DEPENDENT ON COMBUSTION CONDITIONS. A COMPLEX MIXTURE OF AIRBORNE SOLIDS, LIQUIDS AND GASES EVOLVE WHEN THIS MATERIAL UNDERGOES PYROLYSIS OR COMBUSTION. ACIDS, ALDEHYDES, CARBON MONOXIDE, CARBON DIOXIDE, KETONES, AND OTHER UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED UPON COMBUSTION.

SECTION 11 **TOXICOLOGICAL INFORMATION**

ACUTE TOXICITY: DERMAL LD 50 9.5 g/kg (RABBIT) OSHA:NON-TOXIC BASED ON COMPONENTS.
ORAL LD₅₀ 1ml/kg (HUMAN) OSHA:NON-TOXIC BASED ON COMPONENTS.
CARCINOGENICITY CLASSIFICATION ANTIFREEZE/COOLANT: NTP: NO
IARC: NOT REVIEWED ACGIH: NO OSHA: NO

DEVELOPMENTAL TOXICITY: ORAL EXPOSURE OF PREGNANT RATS AND MICE TO ETHYLENE GLYCOL HAS PRODUCED BIRTH DEFECTS IN THE OFFSPRING.

KIDNEY: INGESTION OF ETHYLENE GLYCOL CAN CAUSE BLADDER STONES AND KIDNEY DAMAGE WHICH CAN BE FATAL.

LIVER: PROLONGED AND REPEATED INGESTION OF ETHYLENE GLYCOL HAS PRODUCED LIVER DAMAGE IN FATS.

SECTION 12 **DISPOSAL CONSIDERATIONS**

RCRA INFORMATION: UNDER RCRA, IT IS THE RESPONSIBILITY OF THE USER OF THE MATERIAL TO DETERMINE AT THE TIME OF THE DISPOSAL, WHETHER THE MATERIAL MEETS RCRA CRITERIA FOR HAZARDOUS WASTE. THIS IS BECAUSE MATERIAL USES, TRANSFORMATIONS, MIXTURES, PROCESSES, ETC. MAY AFFECT THE CLASSIFICATION. REFER TO THE LATEST EPA, STATE AND LOCAL REGULATIONS REGARDING PROPER DISPOSAL.