

\*\*\*\*MATERIAL SAFETY DATA SHEET\*\*\*\*

**MANUFACTURER:**

STAR BRITE DISTRIBUTING, INC.  
4041 S. W. 47 AVENUE  
FT. LAUDERDALE, FL 33314

**EMERGENCY TELEPHONE NO.:**

800-424-9300 or 703-527-3887 Chemtrec

**INFORMATION TELEPHONE NO.:**

954-587-6280

DATE OF PREPARATION: March 15, 2010

Replaces: August 17, 2006

**SECTION I: PRODUCT IDENTIFICATION**

**PRODUCT NAME:** STAR BRITE ANTI-FREEZE  
**PRODUCT NUMBER:** 30200, 601013

**CHEMICAL NAME:** ETHYLENE GLYCOL  
**CHEMICAL FAMILY:** GLYCOL

**SECTION II-A: PRODUCT/INGREDIENT**

| <u>NO.</u> | <u>COMPOSITION</u>      | <u>CAS NUMBER</u> | <u>PERCENT</u> |
|------------|-------------------------|-------------------|----------------|
| P          | STAR BRITE ANTI-FREEZE  | MIXTURE           | 100            |
| 1          | ETHYLENE GLYCOL         | 107-21-1          | 84-94          |
| 2          | DIETHYLENE GLYCOL       | 111-46-6          | 0-10           |
| 3          | WATER                   | 7732-18-5         | 2-4            |
| 4          | INORGANIC/ORGANIC SALTS |                   | 2-4            |

NFPA HAZARD RATING: HEALTH 1 FIRE 0 REACTIVITY 0

**SECTION II-B: ACUTE TOXICITY DATA**

| <u>NO.</u> | <u>ACUTE ORAL LD50</u> | <u>ACUTE DERMAL LD50</u> | <u>ACUTE INHALATION LC50</u> |
|------------|------------------------|--------------------------|------------------------------|
| 1          | 4.0 G/KG (RAT)         | NONE                     | NONE                         |
| 2          | 14.8 G/KG (RAT)        | 11.9G/KG (RAT)           | NONE                         |

**SECTION III: HEALTH INFORMATION**

THE HEALTH EFFECTS NOTED BELOW ARE CONSISTENT WITH REQUIREMENTS UNDER THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910. 1200).

**EYE CONTACT:** BASED ON PRESENCE OF COMPONENT 1, PRODUCT IS MODERATELY TO SEVERELY IRRITATING TO THE EYES. VAPORS CAN ALSO CAUSE SEVERE EYE IRRITATION.

**SKIN CONTACT:** BASED ON PRESENCE OF COMPONENTS 1 AND 2, PRODUCT IS MILDLY IRRITATING TO THE SKIN AND SLIGHTLY TOXIC ON PROLONGED OR REPEATED CONTACT.

**INHALATION:** VAPORS ARE MILDLY TO MARKEDLY IRRITATING TO THE LUNGS DEPENDING ON THE EXPOSURE LEVEL.

**INGESTION:** PRODUCT MAY BE HARMFUL OR FATAL IF SWALLOWED; MAY PRODUCE CENTRAL NERVOUS SYSTEM (CNS) DEPRESSION AND KIDNEY DAMAGE WHICH MAY BE FATAL. INGESTION OF COMPONENT 2 MAY ALSO PRODUCE LIVER DAMAGE.

**SIGNS AND SYMPTOMS:**

IRRITATION AS NOTED ABOVE. EARLY TO MODERATE CNS DEPRESSION MAY BE EVIDENCED BY GIDDINESS, HEADACHE, DIZZINESS AND NAUSEA. IN EXTREME CASES, UNCONSCIOUSNESS AND DEATH MAY OCCUR. KIDNEY DAMAGE MAY BE EVIDENCED BY CHANGES IN URINE OUTPUT, URINE APPEARANCE OR EDEMA (SWELLING FROM FLUID RETENTION). LIVER DAMAGE MAY BE EVIDENCED BY LOSS OF APPETITE, JAUNDICE (YELLOWISH SKIN COLOR) AND SOMETIMES PAIN IN THE UPPER ABDOMEN ON THE RIGHT SIDE.

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**SECTION III: HEALTH INFORMATION CONT'D**

**AGGRAVATED MEDICAL**

**CONDITIONS:** PREEXISTING SKIN, EYE AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT. IMPAIRED KIDNEY AND LIVER FUNCTIONS FROM PREEXISTING DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT.

**OTHER HEALTH**

**EFFECTS:** INTENTIONAL ABUSE. MISUSE OR OTHER MASSIVE EXPOSURE MAY CAUSE MULTIPLE ORGAN DAMAGE AND/OR HEALTH.

SEE SECTION VI FOR ADDITIONAL INFORMATION.

**SECTION IV: OCCUPATIONAL EXPOSURE LIMITS**

| NO. | OSHA PEL/TWA | OSHA PEL/CEILING | ACGIH TLV/TWA | ACGIH TLV/STEL | OTHER |
|-----|--------------|------------------|---------------|----------------|-------|
| 1   |              | 50 PPM           | 39.4 PPM*     |                |       |

\*CEILING (AEROSOL)

**SECTION V: EMERGENCY AND FIRST AID PROCEDURES**

**EYE CONTACT:** IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION.

**SKIN CONTACT:** FLUSH SKIN WITH WATER. IF IRRITATION OCCURS, GET MEDICAL ATTENTION.

**INHALATION:** REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GET MEDICAL ATTENTION.

**INGESTION:** DO NOT GIVE LIQUIDS IF VICTIM IS UNCONSCIOUS OR VERY DROWSY. OTHERWISE, GIVE NO MORE THAN 2 GLASSES OF WATER AND INDUCE VOMITING BY GIVING 30CC (2 TABLESPOONS) SYRUP OF IPECAC.\* IF IPECAC IS UNAVAILABLE, GIVE 2 GLASSES OF WATER AND INDUCE VOMITING BY TOUCHING FINGER TO BACK OF VICTIM'S THROAT. KEEP VICTIM'S HEAD BELOW HIPS WHILE VOMITING. GET MEDICAL ATTENTION.

**NOTE TO PHYSICIAN**

\*IF VICTIM IS A CHILD, GIVE NO MORE THAN 1 GLASS OF WATER AND 15CC (1 TABLESPOON) OF SYRUP OF IPECAC. IF SYMPTOMS SUCH AS LOSS OF GAG REFLEX, CONVULSIONS OR UNCONSCIOUSNESS OCCUR BEFORE EMESIS, GASTRIC LAVAGE SHOULD BE CONSIDERED FOLLOWING INTUBATION WITH A CUFFED ENDOTRACHEAL TUBE.

**SECTION VI: SUPPLEMENTAL HEALTH INFORMATION**

RARE CASE REPORTS OF ETHYLENE GLYCOL SENSITIZATION (ALLERGY) HAVE BEEN PUBLISHED BUT ALLERGY TO ETHYLENE GLYCOL IS NOT A COMMON PHENOMENON.

IN ONE STUDY, WHEN ETHYLENE GLYCOL WAS ADMINISTERED IN THE DIET AT DAILY DOSES UP TO 1.0 G/KG TO PREGNANT RATS. NO MATERIAL TOXICITY, NO EMBRYOTOXICITY NOR TERATOGENICITY WERE OBSERVED. IN A MORE RECENT STUDY, WHEN ETHYLENE GLYCOL WAS ADMINISTERED BY GAVAGE AT DAILY DOSES OF 1.25 G/KG AND ABOVE TO PREGNANT RATS, OR AT 750 MG/KG AND ABOVE TO PREGNANT MICE, THERE WAS AN INCREASE IN THE NUMBER OF MALFORMED FETUSES AT ALL DOSE LEVELS. EXCEPT AT THE LOWEST DOSE LEVEL IN MICE, THERE WAS ALSO EVIDENCE OF MATERNAL TOXICITY AT ALL DOSE LEVELS.

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#### SECTION VI: SUPPLEMENTAL HEALTH INFORMATION CON'T

IN ONE STUDY, DIETHYLENE GLYCOL ADMINISTERED ORALLY AT HIGH DOSES TO PREGNANT RATS AND MICE CAUSED TOXICITY TO THE EMBRYOFETUS INCLUDING DECREASED FETAL BODY WEIGHTS AND INCREASED VARIATIONS. BUT NO BIRTH DEFECTS WERE OBSERVED. THERE WAS ALSO MATERNAL TOXICITY INCLUDING SOME LETHALITY.

IN ANOTHER STUDY, DIETHYLENE GLYCOL ADMINISTERED TO HAMSTERS BY I.P. INJECTION AT DOSES OF 2.5 - 4.48 G/KG ON THE 8TH DAY OF GESTATION RESULTED IN NEURAL TUBE ABNORMALITIES IN ALL DOSE GROUPS BUT NOT IN THE CONTROLS. THERE WAS EVIDENCE OF MATERNAL TOXICITY IN TREATED ANIMALS. UNDER THE CONDITIONS OF THIS STUDY, DEG CAUSED DEVELOPMENTAL EFFECTS IN HAMSTERS. THE SIGNIFICANT OF THIS INFORMATION TO MAN IS UNKNOWN.

#### SECTION VII: PHYSICAL DATA

|   |                                     |                                 |
|---|-------------------------------------|---------------------------------|
| BOILING POINT: 330-340<br>(DEG F)             | SPECIFIC GRAVITY: 1.1373<br>(H2O=1) | VAPOR PRESSURE: N/AV<br>(MM HG) |
| MELTING POINT: N/AV<br>(DEG F)                | SOLUBILITY: COMPLETE<br>(IN WATER)  | VAPOR DENSITY: >1<br>(AIR=1)    |
| EVAPORATION RATE (N-BUTYL ACETATE = 1): <0.01 |                                     | POUR POINT =<br>-40 DEG. F      |
| PH: 10.5                                      |                                     |                                 |
| NITRATE: 2400 PPM                             |                                     |                                 |
| SILICON: <250 PPM                             |                                     |                                 |

APPEARANCE AND ODOR: COLORLESS TO GREEN, SLIGHTLY VISCOUS LIQUID. MILD ODOR.

#### SECTION VIII: FIRE AND EXPLOSION HAZARDS

**FLASH POINT AND METHOD:** 246°F (118.88°C) SETAFLASH  
**FLAMMABLE LIMITS /% VOLUME IN AIR**  
LOWER: N/AP UPPER: N/AP

**EXTINGUISHING MEDIA:**  
USE WATER FOG, "ALCOHOL" FOAM, DRY CHEMICAL OR CO2.

**SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS:**  
MATERIAL WILL NOT BURN UNLESS PREHEATED. DO NOT ENTER CONFINED FIRE SPACE WITHOUT FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS), INCLUDING A POSITIVE PRESSURE NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER.

#### SECTION IX: REACTIVITY

STABILITY: STABLE  
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

**CONDITIONS AND MATERIALS TO AVOID:**  
KEEP AWAY FROM STRONG OXIDIZING AGENTS.

**HAZARDOUS DECOMPOSITION PRODUCTS:**  
CARBON MONOXIDE AND UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED DURING COMBUSTION.

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#### **SECTION X: EMPLOYEE PROTECTION**

##### **RESPIRATORY PROTECTION:**

IF EXPOSURE MAY OR DOES EXCEED OCCUPATIONAL EXPOSURE LIMITS (SEC. IV) USE A NIOSH-APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE. IN ACCORD WITH 29 CFR 1910.134 USE EITHER AN ATMOSPHERE-SUPPLYING RESPIRATOR OR AN AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS.

##### **PROTECTIVE CLOTHING:**

AVOID CONTACT WITH EYES. WEAR CHEMICAL GOGGLES IF THERE IS LIKELIHOOD OF CONTACT WITH EYES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. WEAR CHEMICAL RESISTANT GLOVES AND OTHER CLOTHING AS REQUIRED TO MINIMIZE CONTACT. TEST DATA FROM PUBLISHED LITERATURE AND/OR GLOVE PVC OR NATURAL RUBBER GLOVES.

##### **ADDITIONAL PROTECTIVE MEASURES:**

USE VENTILATION AS REQUIRED TO CONTROL VAPOR CONCENTRATIONS. EYE WASH FOUNTAINS AND SAFETY SHOWERS SHOULD BE AVAILABLE FOR EMERGENCY USE.

#### **SECTION XI: ENVIRONMENTAL PROTECTION**

##### **SPILL OR LEAK PROCEDURES:**

MAY BURN ALTHOUGH NOT READILY IGNITABLE. USE CAUTIOUS JUDGMENT WHEN CLEANING UP LARGE SPILLS. \*\*\* LARGE SPILLS \*\*\* WEAR RESPIRATOR AND PROTECTIVE CLOTHING AS APPROPRIATE. SHUT OFF SOURCE OF LEAK IF SAFE TO DO SO. DIKE AND CONTAIN. REMOVE WITH VACUUM TRUCKS OR PUMP TO STORAGE/SALVAGE VESSELS. SOAK UP RESIDUE WITH AN ABSORBENT SUCH AS CLAY, SAND OR OTHER SUITABLE MATERIAL. DISPOSE OF PROPERLY. FLUSH ARE WITH WATER TO REMOVE TRACE RESIDUE. \*\*\* SMALL SPILLS \*\*\* TAKE UP WITH AN ABSORBENT MATERIAL AND DISPOSE OF PROPERLY.

#### **SECTION XII: SPECIAL PRECAUTIONS**

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

WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES. LAUNDRER CONTAMINATED CLOTHING BEFORE REUSE.

#### **SECTION XIII: TRANSPORTATION REQUIREMENTS**

##### **DEPARTMENT OF TRANSPORTATION CLASSIFICATION:**

REGULATED ONLY IN PACKAGES THAT CONTAIN 5000 LBS. OR GREATER OF ETHYLENE GLYCOL.

##### **D.O.T. PROPER SHIPPING NAME:**

REGULATED ONLY IN PACKAGES THAT CONTAIN 5000 LBS. OR GREATER OF ETHYLENE GLYCOL.

##### **IATA AND IMDG:**

NOT REGULATED

##### **OTHER REQUIREMENTS:**

NA3082, GUIDE 31. REGULATED ONLY IN PACKAGES THAT CONTAIN 5000 LBS. OR GREATER OF ETHYLENE GLYCOL.

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**SECTION XIV: OTHER REGULATORY CONTROLS**

THE COMPONENTS OF THIS PRODUCT ARE LISTED ON THE EPA/TSCA INVENTORY OF CHEMICAL SUBSTANCES.

PROTECTION OF STRATOSPHERIC OZONE (PURSUANT TO SECTION 611 OF THE CLEAR AIR ACT AMENDMENTS OF 1990): PER 40 CFR PART 82, THIS PRODUCT DOES NOT CONTAIN NOR WAS IT DIRECTLY MANUFACTURED WITH ANY CLASS I OR CLASS II OZONE DEPLETING SUBSTANCES.

IN ACCORDANCE WITH SARA TITLE III, SECTION 313, THE ATTACHED ENVIRONMENTAL DATA SHEET (EDS) SHOULD ALWAYS BE COPIED AND SENT WITH THE MSDS.

**SECTION XV: STATE REGULATORY INFORMATION**

THE FOLLOWING CHEMICALS ARE SPECIFICALLY LISTED BY INDIVIDUAL STATES. OTHER PRODUCT SPECIFIC HEALTH AND SAFETY DATA IN OTHER SECTIONS OF THE MSDS MAY ALSO BE APPLICABLE FOR STATE REQUIREMENTS. FOR DETAILS ON YOUR REGULATORY REQUIREMENTS YOU SHOULD CONTACT THE APPROPRIATE AGENCY IN YOUR STATE.

| <u>STATE LISTED COMPONENT</u>           | <u>PERCENT</u> | <u>STATE CODE</u>                          |
|---|----------------|--|
| ETHYLENE GLYCOL<br>(CAS NO: 107-21-1)   | 84-94          | CA, CT, FL, IL, LA, MA, ME, MN, NJ, PA, RI |
| DIETHYLENE GLYCOL<br>(CAS NO: 111-46-6) | 0-10           | CA, MN,PA,RI                               |

CA = CALIFORNIA HAZ. SUBST. LIST: CA65C, CA65R, CA65C/R = CALIFORNIA SAFE DRINKING WATER AND TOXICS ENFORCEMENT ACT OF 1986 OR PROPOSITION 65 LIST. CT = CONNECTICUT TOX. SUBST. LIST. FL = FLORIDA SUBST. LIST. IL = ILLINOIS TOX. SUBST. LIST. LA = LOUISIANA HAZ. SUBST. LIST. MA = MASSACHUSETTS HAZ. SUBST. LIST, ME = MAINE HAZ. SUBST. LIST. MN = MINNESOTA HAZ. SUBST. LIST. NJ = NEW JERSEY HAZ. SUBST. LIST. PA = PENNSYLVANIA HAZ. SUBST. LIST. RI = RHODE ISLAND HAZ. SUBST. LIST.

**SECTION XVI: SPECIAL NOTES**

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, STAR BRITE MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. STAR BRITE ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.

# ENVIRONMENTAL DATA SHEET

EDS NUMBER: 80,070-4

PRODUCT: STAR BRITE ANTI-FREEZE  
PRODUCT NO: 30200, 601013

## SECTION I: PRODUCT/COMPOSITION

|  |                         |           |       |
|--|-------------------------|-----------|-------|
| P  | STAR BRITE ANTI-FREEZE  | MIXTURE   | 100   |
| 1  | ETHYLENE GLYCOL         | 107-21-1  | 84-94 |
| 2  | DIETHYLENE GLYCOL       | 111-46-6  | 0-10  |
| 3  | WATER                   | 1132-18-5 | 2-4   |
| 4  | INORGANIC/ORGANIC SALTS |           | 2-4   |
| NFPA HAZARD RATING: HEALTH 1 FIRE 0 REACTIVITY 0 |                         |           |       |

## SECTION II: SARA TITLE III INFORMATION

| NO.    | EHS RQ (LBS)<br>(*1) | EHS TPQ (LBS)<br>(*2) | (*3) | SEC 313 | 313 CATEGORY<br>(*4) | 311/312 CATEGORIES<br>(*5) |
|--------|----------------------|-----------------------|------|---------|----------------------|----------------------------|
| P<br>1 |                      |                       |      | YES     |                      | H-1, H-2                   |

## FOOTNOTES

- \*1 = REPORTABLE QUANTITY OF EXTREMELY HAZARDOUS SUBSTANCE. SEC.302  
\*2 = THRESHOLD PLANNING QUANTITY, EXTREMELY HAZARDOUS SUBSTANCE. SEC.302  
\*3 = TOXIC CHEMICAL, SEC 313  
\*4 = CATEGORY AS REQUIRED BY SEC 313 (40 CFR 372.65 C), MUST BE USED ON TOXIC RELEASE INVENTORY FORM  
\*5 = HAZARD CATEGORY FOR SARA SEC. 311/312 REPORTING  
HEALTH H-1 = IMMEDIATE (ACUTE) HEALTH HAZARD H-2 = DELAYED (CHRONIC) HEALTH HAZARD  
PHYSICAL P-3 = FIRE HAZARD P-4 = SUDDEN RELEASE OF PRESSURE HAZARD  
P-5 = REACTIVE HAZARD

## SECTION III: ENVIRONMENTAL RELEASE INFORMATION

EPA - COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT. UNDER EPA-CERCLA ("SUPERFUND") RELEASES TO AIR, LAND OR WATER WHICH EXCEED THE REPORTABLE QUANTITY MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER, 800-424-8802.

THE REPORTABLE QUANTITY (RQ) FOR A RELEASE OF THIS PRODUCT IS 5,319 LBS., WHICH IS BASED ON THE PRESENCE OF COMPONENT #1.

## SECTION IV: RCRA INFORMATION

PLACE IN AN APPROPRIATE DISPOSAL FACILITY IN COMPLIANCE WITH LOCAL REGULATIONS.

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, STAR BRITE MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. STAR BRITE ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.

DATE PREPARED: March 14, 2010