MATERIAL SAFETY DATA SHEET

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HEALTH = 1, FLAMMABILITY = 0, REACTIVITY = 1, SPECIAL = NONE, DEGREE OF HAZARD: 4 = EXTREME, 3 = HIGH, 2 = MODERATE, 1 = SLIGHT, 0 = INSIGNIFICANT

PRODUCT NAME: BROWNING TREATMENT

DOCUMENT CODE: Browning Treatment

DATE: 10/29/92

DATE REVIEWED: 08/12/99

EMERGENCY 24-HOUR TELEPHONE # 1-800-424-9300 (CHEMTREC)

N/A = Not applicable

N/D = Not determined

CHEMICAL FAMILY: Aqueous reducing agent

SECTION I: HAZARDOUS INGREDIENTS/HEALTH HAZARD DATA

This product has not been tested às a whole for health effects on animals or humans. According to the OSHA Hazardous Communications Standard (29 CFR 1910.1200) any hazardous ingredients that comprise >1.0% of the material and any carcinogenic ingredients that comprise >0.1% must be listed on the MSDS.

SECTION I (a): List of carcinogenic ingredients at >0.1%.

None.

SECTION I (b): List of hazardous ingredients at >1.0%.

NAME

CAS NO.

SODIUM METABISULFITE

7681-57-4

Can cause irritation of eyes, nose, throat and respiratory system. Can aggravate existing respiratory and skin disorders. Asthmatics should not be exposed to material. ACGIH TLV is 5 mg/m3.

SECTION II: EMERGENCY AND FIRST AID PROCEDURES

EYES: Flush with water for at least 15 min. Consult physician.

Remove contaminated clothing. Thoroughly wash exposed skin with soap and water. SKIN:

INHALED: Remove to fresh air. If symptoms persist or are severe seek medical attention.

INGESTION: Drink water. Seek immediate medical attention.

PHYSICIAN: Treatment based on the judgment of attending physician. Contains Sodium Bisulfite that may produce hypersensitivity

reactions in asthmatics and others.

SECTION III: PHYSICAL / CHEMICAL DATA

APPEARANCE AND ODOR: Clear colorless liquid with sulfur dioxide odor.

WATER SOLUBILITY, % BY WT: > 98

SPECIFIC GRAVITY: 1.01 - 1.02 % VOLATILE BY WT: 97 - 98

pH: 3.5 - 4.5

WT/GAL: 8.5 lbs.

Boiling point: N/D

SECTION IV: FIRE AND EXPLOSION DATA

FLASH POINT: > 200 degrees F (TCC)

AUTO-IGNITION TEMPERATURE: N/D

EXPLOSIVE LIMITS - LEL: N/D UEL: N/D

EXTINGUISHING MEDIA: Foam, CO2, water fog or dry chemical.

SPECIAL FIRE FIGHTING PROCEDURES: Use NIOSH/MSHA approved self-contained positive-pressure breathing apparatus and protective clothing where this material is involved in a fire.

UNUSUAL FIRE AND EXPLOSION HAZARD: None known.

SECTION V: REACTIVITY DATA

STABILITY: Stable

HAZARDOUS POLYMERIZATION: Will not occur.

INCOMPATIBILITY: Oxidizers, acids and bases. Corrosive to most metals.

HAZARDOUS DECOMPOSITION/COMBUSTION PRODUCTS: Sulfur dioxide and sulfuric acid.

SECTION VI: SPILLS, LEAKS AND DISPOSAL PROCEDURES

WASTE DISPOSAL: In accordance with Federal, State and Local regulations.

NEUTRALIZING CHEMICALS: Water

SECTION VII: PROTECTION MEASURES

VENTILATION: Use local exhaust or dilution ventilation.

EYE PROTECTION: Chemical resistant safety glasses.

RESPIRATORY PROTECTION: When adequate ventilation cannot be achieved or if individual may be sensitive to material, use

NIOSH/MSHA approved respirator equipped with acid vapor cartridges.

GLOVES: Rubber gloves .

OTHER PROTECTIVE EQUIPMENT: Body-covering clothing should be worn.

SECTION VIII: SPECIAL PRECAUTIONS

One should always use chemicals with awareness of potential hazards, known and unknown, and their effect on the human system. We urge users to minimize employee exposure to all chemicals, including this product and to keep the level of exposure commensurate with good industrial hygiene practices.

DISCLAIMER OF LIABILITY

The manufacturer and seller warrants that this product conforms to its standard specifications when used according to directions. As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true and accurate but all statements or suggestions are made without any warranty, expressed or implied, regarding accuracy of the information, the hazards connected with the use of the material and the results to be obtained from the use thereof.