SAFETY DATA SHEET

SECTION 1  MATERIAL AND MANUFACTURER IDENTIFICATION

PRODUCT

Product Identifier: Browning Treatment
Intended Product Use: Textile Anti-Browning Treatment
Manufacturer Identification Code: 1000

MANUFACTURER

Chemical Technologies International Inc.
P.O. Box 968
Rancho Cordova, CA 95741 USA
Phone: (916) 638-1315  Fax: (916) 638-0712
24 hours Emergency Assistance Calls (USA): CHEMTREC (800) 424-9300

Please reference name and manufacturers identification number

SECTION 2  HAZARD(S) IDENTIFICATION

GHS CLASSIFICATION

Acute Toxicity, Oral (Category 5)
Acute Toxicity, Dermal (Category 5)
Serious Eye Damage/Eye Irritation (Category 2B)
Acute Toxicity, Inhalation (Category 5)

Routes of Exposure: Eye contact, skin contact, inhalation, and ingestion.
Inhalation: Inhalation of mist or vapor may cause severe irritation of the respiratory tract. Overexposure may result in coughing, choking or shortness of breath.
Eye Contact: Vapors/mist may irritate eyes. Irritation is characterized by redness, itching, or watering of eyes. Direct or prolonged contact with eyes will be painful and irritating; seek immediate medical attention for prolonged irritation.
Skin Contact: Repeated exposure may cause skin irritation, inflammation, drying, and/or chapping.
Ingestion: If swallowed may cause GI irritation with abdominal pain, nausea, vomiting, diarrhea, violent colic, and possible gastric hemorrhaging. Do not induce vomiting, seek immediate medical attention.
Carcinogenic Potential: Not established
Acute Effects: This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.
Chronic Effects: Not established.

<table>
<thead>
<tr>
<th>Health hazard</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability hazard</td>
<td>0</td>
</tr>
<tr>
<td>Reactivity hazard</td>
<td>0</td>
</tr>
<tr>
<td>Other hazard</td>
<td></td>
</tr>
</tbody>
</table>

Signal word: Warning

Hazard statement(s): H303: May be harmful if swallowed;
H313: May be harmful in contact with skin;
H320: Causes eye irritation;
H333: May be harmful if inhaled.
Product Name: Browning Treatment

SECTION 3 | COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAS #</th>
<th>CONCENTRATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sodium Metabisulfite</td>
<td>7681-57-4</td>
<td>10-15%</td>
</tr>
<tr>
<td>2. Ammonium Hydroxide</td>
<td>1336-21-6</td>
<td>1-10%</td>
</tr>
</tbody>
</table>

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SECTION 4 | FIRST-AID MEASURES

Inhalation: Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention. If breathing stops, have trained person administer oxygen with a resuscitation mouth cover. Seek immediate medical attention.

Eye Contact: Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

Skin Contact: Wash contact areas with soap and water. Launder exposed clothing before reuse.

Ingestion: If swallowed, do not induce vomiting. Seek immediate medical attention.

SECTION 5 | FIRE-FIGHTING MEASURES

FLAMMABILITY PROPERTIES

- Flashpoint: Non-Combustible; Non-Flammable
- Flammable Limits: Not Available.
- Auto Ignition Temperature: Not Available.

FIREFIGHTING PROCEDURES

General Hazard: During a fire smoke may contain the original material in addition to toxic and or irritating compounds. Avoid heat sparks or open flame.

Firefighting Instructions: Evacuate all unnecessary personnel. Keep away from heat, sparks and open flame. Use dry chemical or CO₂. Use water or foam to cool surrounding containers. Direct water stream may spread the fire.

Firefighting Equipment: Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

Hazardous Combustion Products: Hazardous combustion products may include but limited to: CO, CO₂.

Unusual Fire and Explosion Hazards: No known unusual fire/explosion hazards. Keep away from strong oxidizing and acidic agents.

SECTION 6 | ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33
Product Name: Browning Treatment

CLEAN-UP PROCEDURES
Small Spills: Wipe up or mop to dispose of spill in DOT approved waste container.
Large Spills: Contain by diking with soil or other non-combustible absorbent material, and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

SECTION 7 HANDLING AND STORAGE

HANDLING
This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. Always work in a well-ventilated area and avoid inhalation of product vapor or mist. Do not ingest.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its 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 but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

STORAGE
Avoid excessive heat. Avoid storage with oxidizing or reducing agents and/or acids. Avoid storage with combustible organic materials. Employees should be trained to handle this product safely. Loosen closures cautiously. Store the product in a cool dry area away from ignition sources.
Storage temperature: Store in cool dry place
Storage pressure: Atmospheric

SECTION 8 EXPOSURE / PERSONAL PROTECTION

EXPOSURE LIMITS
Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. Limits for components are listed below:

<table>
<thead>
<tr>
<th>COMPONENT #</th>
<th>OSHA PEL TWA STEL</th>
<th>ACGIH TLV TWA STEL</th>
<th>NIOSH TWA STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sodium Metabisulfite</td>
<td>5 mg/m3</td>
<td>5 mg/m3</td>
<td>5 mg/m3</td>
</tr>
<tr>
<td>2. Ammonium Hydroxide</td>
<td>35ppm</td>
<td>25ppm</td>
<td>25ppm</td>
</tr>
</tbody>
</table>
**Product Name:** Browning Treatment

**ENGINEERING CONTROLS**
The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

**PERSONAL PROTECTION**
Ventilation and engineering controls: Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

Respiratory: Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

Eye Protection: Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33
Skin: Wear chemical impervious gloves. Gloves must be inspected before use. Dispose of gloves after use in accordance with applicable laws and good laboratory practices. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.
Other: One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

<table>
<thead>
<tr>
<th>SECTION 9</th>
<th>PHYSICAL AND CHEMICAL PROPERTIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State and Appearance: Liquid</td>
<td>Color: Clear</td>
</tr>
<tr>
<td>Odor: Light Sulfur Odor</td>
<td>pH: 4</td>
</tr>
<tr>
<td>Freezing point: Not Available.</td>
<td>Melting point: Not Available.</td>
</tr>
<tr>
<td>Solubility in water: Soluble</td>
<td>Density: Not Available.</td>
</tr>
<tr>
<td>Flammability: Not Flammable</td>
<td>Evaporation rate: Not Available.</td>
</tr>
<tr>
<td>Flash point: Non-Flammable, Noncombustible</td>
<td>Relative density: Not Available.</td>
</tr>
<tr>
<td>Vapor pressure: Not Available.</td>
<td>Vapor density: Not Available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SECTION 10</th>
<th>STABILITY AND REACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Stability: Stable under ambient temperature and atmospheric pressure.</td>
<td></td>
</tr>
<tr>
<td>Conditions to avoid: Keep away from heat or excessive pressure. Keep away from heat or excessive pressure. Do not contaminate. May be corrosive in presence of zinc, copper or aluminum and their alloys.</td>
<td></td>
</tr>
<tr>
<td>Incompatibility with other materials: Heavy metals, combustible organic materials, reducing agents.</td>
<td></td>
</tr>
<tr>
<td>Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides.</td>
<td></td>
</tr>
<tr>
<td>Hazardous polymerization: Major components of this mixture show no hazardous polymerization.</td>
<td></td>
</tr>
<tr>
<td>Conditions to Avoid: Oxygen, which supports combustion.</td>
<td></td>
</tr>
</tbody>
</table>
Product Name: Browning Treatment

SECTION 11  TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

<table>
<thead>
<tr>
<th>COMPONENT #</th>
<th>TOXICITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sodium Metabisulfite</td>
<td>LD$_{50}$ Oral - rat – 1,540 mg/kg</td>
</tr>
<tr>
<td>2. Ammonium Hydroxide</td>
<td>LD$_{50}$ Oral - rat – 350 mg/kg</td>
</tr>
</tbody>
</table>

SECTION 12  ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

<table>
<thead>
<tr>
<th>COMPONENT #</th>
<th>TOXICITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sodium Metabisulfite</td>
<td>Freshwater fish-(rainbow trout) – LC$_{50}$-150-220 mg/l 96h</td>
</tr>
<tr>
<td></td>
<td>Green algae-(desmodesmonas subspicatus) - LC$_{50}$ – 48 mg/l 96h</td>
</tr>
<tr>
<td>2. Ammonium Hydroxide</td>
<td>Freshwater fish-(rainbow trout) – LC$_{50}$- 0.1ppm 24h</td>
</tr>
</tbody>
</table>

SECTION 13  DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains or any body of water. All disposal methods must be in compliance with all federal, State/Province and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

SECTION 14  TRANSPORT INFORMATION

DOT(US)
Not a hazardous material as shipped per 49 CFR table 172.101 Consult 49 CFR to assure compliance with all applicable federal, state/provincial and local laws and regulations that may apply to you.

IMDG
Not a regulated good.
US Federal Regulations:
OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a
hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written
records. We request that you, as per your legal duty to, make all information in this SDS available to your employees
and those who handle or consume the product. To aid our customers in complying with regulatory requirements
regulatory information for components of this product are indicated below.

This mixture has no established regulatory information all regulatory information given is based on individual
Components of the mixture by component number. This mixture contains no products/chemicals restricted by
California Prop 65.

Regulatory information has not been established for this product. Regulatory information on components within this
mixture is given by:

<table>
<thead>
<tr>
<th>COMPONENT #</th>
<th>Regulatory Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sodium Metabisulfite</td>
<td>OSHA: Harmful by ingestion, irritant. SARA311/312: Acute Health Hazard</td>
</tr>
</tbody>
</table>

While the information is believed to be accurate, CTI makes no representations as to its accuracy or sufficiency. This
SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material
and general guidance on how to safely handle the material in the workplace. All information appearing herein is based
upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since
CTI cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage,
assess and control the risks arising from its use of the material. Users are responsible to verify this data under their
own operating conditions to determine whether this 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 on 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.