Material Safety Data Sheet

Product No. 71 (Quart)

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Product Name: Liquid Pre-Buff Cleaner (Quart)
Product Use: Solvent
MSDS Preparation Date: 9/22/2005
Manufacturer: REMA TIP TOP/NO. AMERICA, 119 Rockland Avenue, Northvale, NJ 07647
24-Hour Emergency Phone Number: 800-424-9300 (CHEMTREC)

2. PRODUCT INGREDIENTS

<table>
<thead>
<tr>
<th>CHEMICAL NAME:</th>
<th>CAS NUMBER:</th>
<th>% RANGE:</th>
<th>OSHA PEL:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent naphtha (petroleum), light aliphatic</td>
<td>64742-89-8</td>
<td>45-55</td>
<td>Not Established</td>
</tr>
<tr>
<td>Trichloroethylene</td>
<td>79-01-6</td>
<td>25-35</td>
<td>100 ppm TWA</td>
</tr>
<tr>
<td>Xylenes (o-, m-, p- isomers)</td>
<td>1330-20-7</td>
<td>17-22</td>
<td>100 ppm TWA; 435 mg/m3 TWA</td>
</tr>
</tbody>
</table>

The balance of ingredients not rated as hazardous as defined in 29 CFR 1910.1200.

This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

This product is regulated under the Canadian Controlled Products Regulations.

3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS:

The product is a clear liquid with a pungent odor. This product is harmful by inhalation, when in contact with the skin, eyes and if it is swallowed. Probable cancer hazard. Overexposure may cause damage to the liver and kidneys. Aspiration hazard. Lung damage may occur if aspirated into the lungs and may be fatal.

EYE: This product may cause irritation to the eyes. Symptoms may include burning, redness, and tearing.

SKIN: This product may cause irritation to the skin. Prolonged and/or repeated skin contact with this product may cause irritation, defatting or dermatitis. Trichloroethylene may cause skin sensitization.

INGESTION: Aspiration Hazard. Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea. May produce central nervous system depression. If aspirated (liquid enters the lung), the product may be rapidly absorbed through the lungs and can result in chemical pneumonitis and pulmonary edema/hemorrhage.

INHALATION: This product may be harmful by inhalation. Overexposure can cause central nervous system depression with symptoms of headache, dizziness, stupor, loss of consciousness or death. Exposure to high concentrations can cause irregular heartbeat, cardiac arrest and death. Overexposure can result in adverse effects on the liver, nervous system and other internal organs.
4. **FIRST AID**

**EYES:** Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention at once.

**SKIN:** For skin contact flush with large amounts of water while removing contaminated clothing. Wash affected area with mild soap and water. If irritation persists, get medical attention. Wash contaminated clothing before reuse.

**INGESTION:** Do not induce vomiting. Call a physician immediately.

**INHALATION:** If inhaled, immediately remove the affected person to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Seek medical attention.

**NOTE TO PHYSICIAN:** Chlorinated hydrocarbons may sensitize the heart to epinephrine and other circulating catecholamines so that arrhythmias may occur. Careful consideration of this potential adverse effect should precede administration of epinephrine or other cardiac stimulants and the selection of bronchodilators.

5. **FIRE FIGHTING MEASURES**

**FLAMMABLE PROPERTIES:**

- **Flash Point:** \(~50^\circ F (10^\circ C)\)
- **Method Used:** Not Available
- **Flammability Classification:** Class IB

**HAZARDOUS COMBUSTION PRODUCTS:** Hazardous combustion products may include and are not limited to hydrogen chloride, carbon monoxide, and carbon dioxide. Hazardous combustion products may include trace amounts of phosgene and chlorine gases.

**EXTINGUISHING MEDIA:** Water fog/spray, carbon dioxide, and foam.

**FIRE FIGHTING INSTRUCTIONS:** This product is a Class IB flammable liquid. Contain fire run-off if possible. Firewater run-off, if not contained may cause environmental damage. Vapors are heavier than air and may travel along the ground to some distant source of ignition and flash back.

**PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS:** Firefighters should wear full-face, self-contained breathing apparatus and impervious protective clothing. Firefighters should avoid inhaling any combustion products.

6. **ACCIDENTAL RELEASE MEASURES**

**CONTAINMENT PROCEDURES:** Stop the flow of material, if this is without risk. Material is heavier than water and has limited water solubility. It will collect on the lowest surface.

**CLEAN-UP PROCEDURES:** Eliminate ignition sources including sources of electrical, static or frictional sparks. Ventilate the contaminated area. Absorb spill with inert material. Shovel material into properly labeled closed metal containers for disposal. Place in non-leaking containers for immediate disposal. Flush area with water to remove trace residue. Do not allow the spilled product to enter public drainage system or open watercourses.
EVACUATION PROCEDURES: Persons not wearing appropriate protective equipment should be excluded from area of spill until clean up has been completed.

SPECIAL PROCEDURES: Follow all Local, State, Federal and Provincial regulations for disposal.

7. HANDLING & STORAGE

HANDLING: Do not get in contact with skin and eyes. Use this product with adequate ventilation. Avoid prolonged or repeated breathing of vapors. Avoid dust or mist formation. Wash thoroughly after handling. DO NOT eat, drink or smoke in product area.

Do not reuse the empty container. Do not cut or weld on empty drums. Sufficient vapors from residues may be present to cause explosion and serious injury and/or death. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner, or promptly disposed of.

STORAGE: Keep packaged in original, labeled containers until use. Store in a cool, dry, well-ventilated area. Store this product in airtight containers away from sources of heat and light. Do not store in aluminum, zinc, aluminum alloys, and plastic containers. Ground all equipment to prevent accumulation of static charge. Store away from incompatible materials. Do not remove or deface label. Do not reuse container without recycling or reconditioning in accordance with any Federal, Provincial, State or local laws. Do not use cutting or welding torches, open flames, or electric arcs on empty or full containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION: Wear safety glasses. Chemical goggles and/or face shields should be worn, when splashing is a possibility. Contact lenses should not be exposed. If vapor exposure causes eye discomfort, use a full-face respirator.

SKIN PROTECTION: Use impervious gloves. Use of impervious apron and boots are recommended.

RESPIRATORY PROTECTION: If recommended exposure limits are exceeded, a NIOSH-approved, continuous flow supplied air-respirator, hood or helmet is acceptable. A NIOSH approved self-contained positive pressure breathing apparatus, with full-face piece, is required for spills and/or emergencies.
EXPOSURE GUIDELINE(s):
Component Exposure Limits
REMA TIP/TOP USA recommends that its customers minimize employee exposure. REMA therefore suggests that its customers consider adopting the lower of the current OSHA PEL or the ACGIH TLV’s for the purpose of evaluating employee exposures. The TLV’s recommended by the ACGIH have been updated on a continuing basis.

**Trichloroethylene (79-01-6)**
**ACGIH:**
- 50 ppm TWA
- 100 ppm STEL

**OSHA:**
- 100 ppm TWA
- 200 ppm Ceiling

**Xylenes (o-, m-, p- isomers) (1330-20-7)**
**ACGIH:**
- 100 ppm TWA
- 150 ppm STEL

**OSHA:**
- 100 ppm TWA; 435 mg/m³ TWA

**Component Exposure Limits - Canada**
The following Provincial Exposure Limits apply for this product's components.

**Trichloroethylene (79-01-6)**
- Alberta: 50 ppm TWA; 269 mg/m³ TWA
  - 100 ppm STEL; 537 mg/m³ STEL
- British Columbia: 50 ppm TWA
  - 100 ppm STEL
- Manitoba: 50 ppm TWA; 270 mg/m³ TWA
  - 200 ppm STEL; 1080 mg/m³ STEL
- New Brunswick: 50 ppm TWA; 269 mg/m³ TWA
  - 100 ppm STEL; 537 mg/m³ STEL
- NW Territories: 100 ppm TWA; 537 mg/m³ TWA
  - 150 ppm STEL; 806 mg/m³ STEL
- Nova Scotia: 50 ppm TWA
  - 100 ppm STEL
- Nunavut: 100 ppm TWA; 537 mg/m³ TWA
  - 150 ppm STEL; 806 mg/m³ STEL
- Ontario: 50 ppm TWAEV
  - 100 ppm STEV
- Quebec: 50 ppm TWAEV; 269 mg/m³ TWAEV
  - 200 ppm STEV; 1070 mg/m³ STEV
- Saskatchewan: 269 mg/m³ TWA; 50 ppm TWA
  - 537 mg/m³ STEL; 100 ppm STEL
- Yukon: 100 ppm TWA; 535 mg/m³ TWA
  - 150 ppm STEL; 800 mg/m³ STEL
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Xylenes (o-, m-, p- isomers) (1330-20-7)

Alberta: 100 ppm TWA; 434 mg/m³ TWA
150 ppm STEL; 651 mg/m³ STEL

British Columbia: 100 ppm TWA
150 ppm STEL

Manitoba: 100 ppm TWA; 435 mg/m³ TWA
150 ppm STEL; 655 mg/m³ STEL

New Brunswick: 100 ppm TWA; 434 mg/m³ TWA
150 ppm STEL; 651 mg/m³ STEL

NW Territories: 100 ppm TWA; 434 mg/m³ TWA
150 ppm STEL; 652 mg/m³ STEL

Nova Scotia: 100 ppm TWA
150 ppm STEL

Nunavut: 100 ppm TWA; 434 mg/m³ TWA
150 ppm STEL; 652 mg/m³ STEL

Ontario: 100 ppm TWAEV; 435 mg/m³ TWAEV
150 ppm STEV; 650 mg/m³ STEV

Quebec: 100 ppm TWAEV; 434 mg/m³ TWAEV
150 ppm STEV; 651 mg/m³ STEV

Saskatchewan: 434 mg/m³ TWA; 100 ppm TWA
651 mg/m³ STEL; 150 ppm STEL

Yukon: 100 ppm TWA; 435 mg/m³ TWA
150 ppm STEL; 650 mg/m³ STEL

9. PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE: clear liquid

ODOR: Pungent  ODOR THRESHOLD: Not Available

BOILING POINT: ~ 280 °F (138°C)

SOLUBILITY IN WATER: Insoluble

SPECIFIC GRAVITY: ~0.743 gm/cc

VAPOR PRESSURE: ~10 mm Hg @ 70°F (21.1°C)

% VOLATILE: >90%

10. STABILITY & REACTIVITY

INCOMPATIBILITY WITH OTHER MATERIALS: Materials to avoid are strong alkalis, oxidizers, barium, lithium, magnesium, powdered aluminum, and titanium. Avoid open flames and welding arcs which can cause thermal degradation.
HAZARDOUS POLYMERIZATION: Will not occur.

DECOMPOSITION PRODUCTS: Hazardous combustion products may include and are not limited to hydrogen chloride, carbon monoxide, and carbon dioxide. Hazardous combustion products may include trace amounts of phosgene and chlorine gases.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY
This product is harmful by inhalation, when in contact with the skin, eyes and if it is swallowed. Aspiration hazard. Lung damage may occur if aspirated into the lungs and may be fatal. Symptoms include coughing and difficulty breathing. May cause CNS effects with symptoms that include headache, drowsiness, dizziness and loss of coordination. Inhalation of high vapor concentrations may cause symptoms of headache, dizziness, drowsiness, nausea and vomiting. Probable cancer hazard.

CHRONIC TOXICITY
Overexposure may cause damage to the liver and kidneys. Repeated or prolonged exposure may cause skin irritation and dermatitis.

Chronic overexposure to the ingredient Trichloroethylene has caused toxic effects in the liver, Lymphatic system (one species), kidney and cardiovascular system of experimental animals. Humans exposed to Trichloroethylene can become intolerant to ethyl alcohol, with small quantities causing inebriation and skin blotches. Reports have been published associating increased incidences of scleroderma (systemic sclerosis) with exposure to Trichloroethylene. The finding of chronic toxic effects in lab animals may indicate toxicity to humans. Overexposure should be avoided; failure to do so could result in illness, injury or even death depending on the level and duration of exposure.

CARCINOGENICITY
This product contains component(s) that may be listed by ACGIH, IARC, NIOSH, NTP OR OSHA.

Component Carcinogenicity

Trichloroethylene (79-01-6)
ACGIH: A5 - Not Suspected as a Human Carcinogen
NIOSH: potential occupational carcinogen
NTP: Reasonably Anticipated To Be A Carcinogen (Possible Select Carcinogen)
IARC: Monograph 63, 1995 (Group 2A (probably carcinogenic to humans))

Xylenes (o-, m-, p- isomers) (1330-20-7)
ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Monograph 71, 1999; Monograph 47, 1989 (Group 3 (not classifiable))

12. ECOLOGICAL INFORMATION
No information available for the product.
Component Analysis - Ecotoxicity - Aquatic Toxicity

Trichloroethylene (79-01-6)

Test & Species  Conditions
96 Hr LC50 fathead minnow  44.1 mg/L flow-through

Xylenes (o-, m-, p- isomers) (1330-20-7)

Test & Species  Conditions
96 Hr LC50 fathead minnow  13.4 mg/L flow-through
96 Hr LC50 rainbow trout  8.05 mg/L flow-through
96 Hr LC50 bluegill  16.1 mg/L flow-through
24 hr EC50 Photobacterium phosphoreum  0.0084 mg/L flow-through
48 Hr EC50 water flea  3.82 mg/L

13. DISPOSAL CONSIDERATIONS

DISPOSAL: Waste must be handled in accordance with all federal, state, provincial, and local regulations.

UNUSED & UNCONTAMINATED PRODUCT:
Component Waste Numbers

Trichloroethylene (79-01-6)
RCRA: waste number U228
0.5 mg/L regulatory level

Xylenes (o-, m-, p- isomers) (1330-20-7)
RCRA: waste number U239 (Ignitable waste, Toxic waste)

Trichloroethylene has a waste number, U228, under RCRA - Hazardous Constituents - Appendix VIII to 40 CFR 261.

14. TRANSPORT INFORMATION

US DOT Information
Shipping Name: Flammable liquids, n.o.s. (Contains: Trichloroethylene ), Mixture
UN/NA #: UN1993 Hazard Class: 3 Packing Group: II
Required Label(s): FLAMMABLE
Additional Info.: PLACARD (WHEN REQUIRED): FLAMMABLE, 3.


ALTERNATE SHIPPING ARRANGEMENTS: Based on package or shipping container size, this product may be shipped as a, "Limited Quantity", or, renamed, "Consumer Commodity" and reclassified as, "ORM-D" Material.
TDG Information
Shipping Name: Flammable liquid, n.o.s. (Contains: Trichloroethylene), Mixture
UN/NA #: UN1993 Hazard Class: 3 Packing Group: II
Required Label(s): FLAMMABLE

IMDG Information
Additional Info.: F-E, S-E
Exceptions: For package and container size when shipped as a limited quantity under packaging instruction P001, Provision PP1 and Chapter 3.4 (Limited Quantity).

IATA Information
Additional Info.: 6.1

15. REGULATORY INFORMATION

US FEDERAL REGULATIONS
SARA 313 INFORMATION:
Component Analysis
This material contains one or more of the following chemicals required to be identified under SARA Section 313 (40 CFR 372.65).
Trichloroethylene (79-01-6)
SARA 313: 0.1 % de minimis concentration
Xylenes (o-, m-, p- isomers) (1330-20-7)
SARA 313: 1.0 % de minimis concentration

SARA HAZARD CATEGORY:
Acute Health: Yes Chronic Health: Yes Fire: Yes Pressure: No Reactive: No

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA):
Component Analysis
This material contains one or more of the following chemicals required to be identified under CERCLA (40 CFR 302.4).
Trichloroethylene (79-01-6)
CERCLA: 100 lb final RQ; 45.4 kg final RQ
Xylenes (o-, m-, p- isomers) (1330-20-7)
CERCLA: 100 lb final RQ; 45.4 kg final RQ

TOXIC SUBSTANCES CONTROL ACT (TSCA): All components are on the U.S. EPA TSCA Inventory List.

Component Analysis - Inventory

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>TSCA</th>
<th>CAN</th>
<th>EEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent naphtha (petroleum), light aliphatic</td>
<td>64742-89-8</td>
<td>Yes</td>
<td>DSL</td>
<td>EINECS</td>
</tr>
<tr>
<td>Trichloroethylene</td>
<td>79-01-6</td>
<td>Yes</td>
<td>DSL</td>
<td>EINECS</td>
</tr>
<tr>
<td>Xylenes (o-, m-, p- isomers)</td>
<td>1330-20-7</td>
<td>Yes</td>
<td>DSL</td>
<td>EINECS</td>
</tr>
</tbody>
</table>
STATE RIGHT-TO-KNOW:
Component Analysis - State
The following components appear on one or more of the following state hazardous substances lists:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>CA</th>
<th>MA</th>
<th>MN</th>
<th>NJ</th>
<th>PA</th>
<th>RI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trichloroethylene</td>
<td>79-01-6</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Xylenes (o-, m-, p- isomers)</td>
<td>1330-20-7</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer.

CANADIAN REGULATIONS
This product is regulated under the Canadian Controlled Products Regulations.

WHMIS INFORMATION:
WHMIS Classification: B2, D2A, D2B

Component Analysis - WHMIS IDL
The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Minimum Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trichloroethylene</td>
<td>79-01-6</td>
<td>1 %</td>
</tr>
</tbody>
</table>

EUROPE:
Component Analysis

<table>
<thead>
<tr>
<th>Component (CAS#)</th>
<th>EC #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent naphtha (petroleum), light aliphatic (64742-89-8)</td>
<td>265-192-2</td>
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<tr>
<td>Trichloroethylene (79-01-6)</td>
<td>201-167-4</td>
</tr>
<tr>
<td>Xylenes (o-, m-, p- isomers) (1330-20-7)</td>
<td>215-535-7</td>
</tr>
</tbody>
</table>
16. OTHER INFORMATION

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATINGS:

NFPA Ratings: Health: 2  Fire: 3  Reactivity: 0  
Hazard Scale: 0 = Minimal  1 = Slight  2 = Moderate  3 = Serious  4 = Severe

MEDICAL EMERGENCIES: FOR ANY OTHER INFORMATION:

Call CHEMTREC 24 hours a day for emergency information
800-424-9300

REMA TIP TOP/NO. AMERICA
119 Rockland Ave.
NORTHVALE, NJ 07647
201-768-8100

NOTICE: REMA TIP/TOP USA believes that the information contained on this material safety data sheet is accurate. The suggested procedures are based on experience as of the date of publication. They are not necessarily all-inclusive nor fully adequate in every circumstance. Also, the suggestions should not be confused with nor followed in violation of applicable laws, regulations, rules or insurance requirements.

NO WARRANTY IS MADE, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE.