MATERIAL SAFETY DATA SHEET
E-Z WATER WASH BRUSH CLEANER

EMERGENCY CONTACT: FOR CHEMICAL EMERGENCY - SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT, CALL CHEMTREC AT 1-(800)-424-9300. DAY OR NIGHT.

INDEX
4 - Severe
3 - Serious
2 - Moderate
1 - Slight
0 - Insignificant

HMS
Flammability
Reactivity

* denotes chronic hazard

NFA
Health
Flammability
Reactivity

Section 2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>INGREDIENT(S)</th>
<th>CAS Number</th>
<th>% (by weight)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALIPHATIC PETROLEUM DISTILLATES</td>
<td>64/74-2-9</td>
<td>36.0 - 40.0</td>
</tr>
<tr>
<td>METHYL ETHYL KETONE</td>
<td>78-93-3</td>
<td>31.0</td>
</tr>
<tr>
<td>TOLUENE</td>
<td>108-86-3</td>
<td>11.0</td>
</tr>
<tr>
<td>ISOPROPAOL</td>
<td>67-63-0</td>
<td>11.0</td>
</tr>
<tr>
<td>NONYLPHENOL + 9 EO POLYETHOXylATE</td>
<td>9016-45-9</td>
<td>3.4 - 7.0</td>
</tr>
<tr>
<td>METHYL ALCOHOL</td>
<td>67-56-1</td>
<td>3.1</td>
</tr>
</tbody>
</table>

Section 3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS:

EYE: Can cause severe eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes. Can injure eye tissue.

SKIN: Can cause skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, and drying and cracking of skin, burns and other skin damage. Passage of this material into the body through the skin is possible, and may add to toxic effects from breathing or swallowing.

SWALLOWING: Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.

INHALATION: Breathing of vapor or mist is possible. Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms usually occur at air concentrations higher than the recommended exposure limits (See Section 8).

SYMPTOMS OF EXPOSURE:
Signs and symptoms of exposure to this material through breathing, swallowing, and / or passage of the material through the skin may include: metallic taste, stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), cough, central nervous system excitation (giddiness, liveliness, light-headed feeling) followed by central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), and other central nervous system effects, temporary changes in mood and behavior, leg cramps, muscle weakness, low blood pressure, pain in the abdomen and lower back, mild, temporary changes in the liver, effects on heart rate, respiratory depression (slowing of the breathing rate), blurred vision, shortness of

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breath, loss of coordination, confusion, difficult breathing, irregular heartbeat, cyanosis (causes blue coloring of the skin and nails from lack of oxygen), lung edema (fluid buildup in the lung tissue), kidney damage, lung damage, visual impairment (including blindness), coma and death.

**TARGET ORGAN EFFECTS:**

Breathing isopropanol vapors has caused damage to the lining of the middle ear in experimental animals. The relevance of this finding to humans is uncertain. Exposure to lethal concentrations of methanol has been shown to cause damage to organs including liver, kidneys, pancreas, heart, lungs and brain. Although this rarely occurs, survivors of severe intoxication may suffer from permanent neurological damage. Based on animal studies, exposure to methyl ethyl ketone (MEK) increases the onset of peripheral neuropathy caused by exposure to methyl butyl ketone (MBK), and/or n-hexane and/or ethyl butyl ketone. MEK alone has not been shown to cause peripheral neuropathy. Studies with rabbits indicate that sustained, occluded skin contact with undiluted surfactant may result in the development of inflammatory changes in the lung. Prolonged intentional toluene abuse may lead to damage to many organ systems having effects on central and peripheral nervous systems, vision, hearing, liver, kidneys, heart and blood. Such abuse has been associated with brain damage characterized by disturbances in gait, personality changes and loss of memory. Comparable central nervous system effects have not been shown to result from occupational exposure to toluene. Prolonged intentional toluene abuse may lead to hearing loss progressing to deafness. In addition, while noise is known to cause hearing loss in humans, it has been suggested that workers exposed to organic solvents, including toluene, along with noise may suffer greater hearing loss than would be expected from exposure to noise alone. Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: mild, reversible liver effects, mild, reversible kidney effects, cardiac sensitization, liver abnormalities, respiratory tract damage (nose, throat, and airways), effects on hearing, central nervous system damage. Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans: cardiac sensitization, visual impairment, and kidney damage.

**DEVELOPMENTAL INFORMATION:**

Toluene may be harmful to the human fetus based on positive test results with laboratory animals. Case studies show that prolonged intentional abuse of toluene during pregnancy can cause birth defects in humans. Methanol has caused birth defects in laboratory animals, but only when inhaled at extremely high vapor concentrations. The relevance of this finding to humans is uncertain.

**CANCER INFORMATION:**

- **No Data**

**OTHER HEALTH EFFECTS:**

- **No Data**

**PRIMARY ROUTE(S) OF ENTRY:**

Inhalation, skin absorption, skin contact, eye contact, ingestion.

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**Section 4. FIRST AID MEASURES**

**EYES:**

If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

**SKIN:**

Remove contaminated clothing. Flush exposed area with large amounts of water. If skin is damaged, seek immediate medical attention. If skin is not damaged and symptoms persist, seek medical attention. Launder clothing before reuse.

**SWALLOWING:**

See medical attention. If individual is down or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

**INHALATION:**

If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

**NOTE TO PHYSICIANS:**

Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse,

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may be associated with cardiac arrhythmias. Symptomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material. This product contains methanol which can cause intoxication and central nervous system depression. Methanol is metabolized to formic acid and formaldehyde. These metabolites can cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used to prevent methanol metabolism. Ethanol administration is indicated in symptomatic patients or at blood methanol concentrations above 20 ug/dl. Methanol is effectively removed by hemodialysis. Fomepizole (4-methylpyrazole) is an effective antagonist of alcohol dehydrogenase, and as such, may be used as an antidote in the treatment of ethylene glycol, diethylene glycol and methanol poisoning. This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity (See Section 3-Swallowing) when deciding whether to induce vomiting. Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: respiratory tract, skin, lung (for example, asthma-like conditions), liver, kidney, central nervous system, pancreas, heart, auditory system. Exposure to this material may aggravate any preexisting condition sensitive to a decrease in available oxygen, such as chronic lung disease, coronary artery disease or anemia. Individuals with preexisting heart disorders may be more susceptible to arrhythmias (irregular heartbeats) if exposed to high concentrations of this material.

Section 5. FIRE FIGHTING MEASURES

FLASH POINT:
10.0 - 19.0 °F (-12.2 - -7.2 °C) TCC

EXPLOSIVE LIMIT:
(for component) Lower 1.2%

AUTOIGNITION TEMPERATURE:
No Data

HAZARDOUS PRODUCTS OF COMBUSTION:
May form: carbon dioxide and carbon monoxide, various hydrocarbons.

FIRE AND EXPLOSION HAZARDS:
Material is highly volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electric motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

EXTINGUISHING MEDIA:
Regular foam, carbon dioxide, dry chemical.

FIRE FIGHTING INSTRUCTIONS:
Water or foam may cause frothing which can be violent and possibly endanger the life of the firefighter. Wear a self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS.

Section 6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL:
Absorb liquid on vermiculite, floor absorbent or other absorbent material.

LARGE SPILL:
Eliminate all ignition sources (flames, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal. Prevent run-off to sewers, streams or other bodies of water. If runoff occurs, notify proper authorities as required, that a spill has occurred.
Section 7. HANDLING AND STORAGE

HANDLING:
Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid and/or solid), all hazard precautions given in the data sheet must be observed. All five-gallon pails and larger metal containers, including tank cars and tank trucks, should be grounded and/or bonded when material is transferred. WARNING. Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION:
Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

SKIN PROTECTION:
Wear resistant gloves (consult your safety equipment supplier). To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

RESPIRATORY PROTECTIONS:
If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

ENGINEERING CONTROLS:
Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

EXPOSURE GUIDELINES:

COMPONENT
ALIPHATIC PETROLEUM DISTILLATES (64742-89-8)
No exposure limits established

METHYL ETHYL KETONE (78-93-3)
OSHA PEL 200,000 ppm - TWA
OSHA VPEL 200,000 ppm - TWA
OSHA VPEL 300,000 ppm - STEL
ACGIH TLV 200,000 ppm - TWA
ACGIH TLV 300,000 ppm - STEL

TOLUENE (108-88-3)
OSHA PEL 200,000 ppm - TWA
OSHA PEL 300,000 ppm - Ceiling
OSHA VPEL 100,000 ppm - TWA
OSHA VPEL 150,000 ppm - STEL
ACGIH TLV 50,000 ppm - TWA (Skin)
ACGIH TLV 150,000 ppm - STEL (Skin)

ISOPROPANOL (67-63-0)
OSHA PEL 400,000 ppm - TWA
OSHA VPEL 400,000 ppm - TWA
OSHA VPEL 500,000 ppm - STEL
ACGIH TLV 400,000 ppm - TWA
ACGIH TLV 500,000 ppm - STEL
**Nonylphenol+ 9 EO Polyethoxylate (9016-45-9)**

No exposure limits established

**Methyl Alcohol (67-56-1)**
- OSHA PEL: 200,000 ppm - TWA
- OSHA VPEL: 200,000 ppm - TWA (Skin)
- OSHA VPEL: 250,000 ppm - STEL (Skin)
- ACGIH TLV: 200,000 ppm - TWA (Skin)
- ACGIH TLV: 250,000 ppm - STEL (Skin)

### Section 9. PHYSICAL AND CHEMICAL PROPERTIES

- **Boiling Point:** (for component) 147.0°F (63.8°C) @ 760 mmHg
- **Vapor Pressure:** (for component) 97.580 mmHg @ 68.00°F
- **Specific Vapor Density:** > 1.000 @ AIR=1
- **Specific Gravity:** 0.784 @ 77.00°F
- **Liquid Density:** 6.520 lbs/gal @ 77.00°F
  - 0.784 kg/l @ 25.00°C
- **Percent Volatiles:** 90.0 - 95.0%
- **Evaporation Rate:** Slower than ethyl ether
- **Appearance:** No Data
- **State:** Liquid
- **Physical Form:** Homogeneous solution
- **Color:** No Data
- **Odor:** No Data
- **pH:** Not applicable

### Section 10. STABILITY AND REACTIVITY

- **Hazardous Polymerization:**
  - Product will not undergo hazardous polymerization.
- **Hazardous Decomposition:**
  - May form: carbon dioxide and carbon monoxide, various hydrocarbons.
- **Chemical Stability:**
  - Stable.
- **Incompatibility:**
  - Avoid contact with: acetaldehyde, acids, chlorine, ethylene oxide, isocyanates, strong oxidizing agents.
  - Do not use with aluminum equipment at temperatures above 120 deg. F.

### Section 11. TOXICOLOGICAL INFORMATION

No Data
Section 12. ECOLOGICAL INFORMATION  
No Data –

Section 13. DISPOSAL CONSIDERATION  
WASTE MANAGEMENT INFORMATION:  
Dispose of in accordance with all applicable local, state and federal regulations.

Section 14. TRANSPORT INFORMATION  
DOT INFORMATION - 49 CFR 172.101  
DOT DESCRIPTION:  
PAINT RELATED MATERIAL, 3, UN1263, II  
CONTAINER/MODE:  
55 GAL DRUM/TRUCK PACKAGE  
NOS COMPONENT:  
NONE

RQ (Reportable Quantity) - 49 CFR 172.101  
PRODUCT QUANTITY (LBS)  
9862  
1695  
COMPONENT  
TOLUENE  
ETHYL METHYL KETONE

OTHER TRANSPORTATION INFORMATION  
The DOT Transport Information may vary with the container and mode of shipment.

Section 15. REGULATORY INFORMATION  
US FEDERAL REGULATIONS:  
TSCA (Toxic Substances Control Act) Status  
TSCA (UNITED STATES) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4 (a)  
COMPONENT  
METHYL ETHYL KETONE  
TOLUENE  
METHYL ALCOHOL

CERCLA RQ - 40 CFR 302.4 (b)  
Materials without a “listed” RQ may be reportable as an “unlisted hazardous substance”.  
See 40 CFR 302.5 (b)

SARA 302 COMPONENTS - 40 CFR 355 Appendix A  
None

Section 311/312 Hazard Class - 40 CFR 370.2  
Immediate (X)  
Delayed (X)  
Fire (X)  
Reactive ( )  
Sudden Release of Pressure ( )

SARA 313 Components - 40 CFR 372.65  
Section 313 Component(s)  
CAS Number  
METHYL ETHYL KETONE  
TOLUENE  
METHANOL

None listed

EPA Accidental Release Prevention - 40 CFR 68  
None listed
INTERNATIONAL REGULATIONS:
INVENTORY STATUS
Not Determined

STATE AND LOCAL REGULATIONS:
CALIFORNIA PROPOSITION 65:
The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986: This product contains the following substance(s) known to the state of California to cause cancer.
BENZENE
ETHYLENE OXIDE
1,4-DIOXANE
ACETALDEHYDE
FORMALDEHYDE (GAS)
The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986: This product contains the following substance(s) known to the state of California to cause reproductive harm.
TOluene
BENZENE
ETHYLENE OXIDE

NEW JERSEY RTK LABEL INFORMATION:
NAPHTHA, SOLVENT 64742-89-8
METHYL ETHYL KETONE 78-93-3
TOluene 108-88-3
ISOPROPYL ALCOHOL 67-63-0
METHYL ALCOHOL 67-56-1

PENNSYLVANIA RTK LABEL INFORMATION:
2-BUTANONE 78-93-3
BENZENE, METHYL- 108-88-2
2-PROPANOL 67-63-0
METHANOL 67-56-1