MATERIAL SAFETY DATA SHEET

This Material Safety Data Sheet conforms to the requirements of ANSI Z400.1.
THIS MSDS COMPLIES WITH 29 CFR 1910.1200 (HAZARD COMMUNICATION STANDARD)
IMPORTANT: Read this MSDS before handling & disposing of this product.
Pass this information on to employees, customers, & users of this product.

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

PRODUCT IDENTITY: CROWN DENATURED ALCOHOL
COMPANY IDENTITY: PACKAGING SERVICE CO., INC.
COMPANY ADDRESS: 1904 MYKAWA ROAD / P O Box 875
COMPANY CITY: PEARLAND, TX 77581
COMPANY PHONE: 1-281-485-1458
CHEMTREC PHONE: 1-800-424-9300

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

CONTAINS: 65-75% METHANOL (67-56-1)[200-659-6],
20-30% ETHANOL (64-17-5)[200-578-6],
< 10% ISOPROPANOL (67-63-0)[200-661-7],
< 10% METHYL ISOBUTYL KETONE (108-10-1)[203-550-1]

Number in parentheses is CAS #, number in brackets is European EC #.

SECTION 3. HAZARDS IDENTIFICATION

RISK STATEMENTS:
R11 Highly Flammable.
R41 Risk of serious damage to eyes.
R36/37/38 Irritating to eyes, respiratory system and skin.
R39/25 Toxic: danger of very serious irreversible effects if swallowed.

SAFETY STATEMENTS:
S7 Keep container tightly closed.
S9 Keep container in a well-ventilated place.
S16 Keep away from sources of ignition. No smoking.
S24 Avoid contact with skin.
S45 In case of accident, or if you feel unwell, seek medical advice immediately. (Show the label where possible).
SECTION 4. FIRST AID MEASURES

**EYE CONTACT:**
For eyes, flush with plenty of water for 15 minutes & get medical attention.

**SKIN CONTACT:**
In case of contact with skin immediately remove contaminated clothing. Wash thoroughly with soap & water. Wash contaminated clothing before reuse.

**INHALATION:**
After high vapor exposure, remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped give artificial respiration.

**SWALLOWING:**
Induce vomiting promptly using physician's instructions or by having patient stick finger down throat. After vomiting has been induced, give two teaspoonfuls of baking soda in a glass of water. CALL A PHYSICIAN. Never give anything by mouth to an unconscious person. Have patient lie down & keep warm. Cover eyes to exclude light.

SECTION 5. FIRE FIGHTING MEASURES

**EXTINGUISHING MEDIA**
NFPA Class B extinguishers (Carbon Dioxide or foam) for Class I B liquid fires.

**SPECIAL FIRE FIGHTING PROCEDURES**
- Water spray may be ineffective on fire but can protect fire-fighters & cool closed containers. Use fog nozzles if water is used.
- Do not enter confined fire-space without full bunker gear.
  (Helmet with face shield, bunker coats, gloves & rubber boots).
- Use NIOSH approved positive-pressure self-contained breathing apparatus.

**UNUSUAL EXPLOSION AND FIRE PROCEDURES**
**HIGHLY FLAMMABLE!! VAPORS CAN CAUSE FLASH FIRE**

Keep container tightly closed.
Isolate from oxidizers, heat, sparks, electric equipment & open flame.
Closed containers may explode if exposed to extreme heat.
Applying to hot surfaces requires special precautions.
Empty container very hazardous! Continue all label precautions!

SECTION 6. ACCIDENTAL RELEASE MEASURES

**CONTAINMENT TECHNIQUES**
Stop spill at source. Dike area & contain.

**CLEAN-UP PROCEDURES:**
Clean up remainder with absorbent materials. Mop up & dispose of. Persons without proper protection should be kept from area until cleaned up.
SECTION 7. HANDLING AND STORAGE

HANDLING:
Isolate from oxidizers, heat, sparks, electric equipment & open flame. Use only with adequate ventilation. Avoid breathing of vapor or spray mist. Avoid contact with skin & eyes. Wear OSHA Standard goggles or face shield. Consult Safety Equipment Supplier. Wear gloves, apron & footwear impervious to this material. Wash clothing before reuse. Avoid free fall of liquid. Ground containers when transferring. Do not flame cut, saw, drill, braze, or weld. Empty container very hazardous! Continue all label precautions!

STORAGE:
Do not store above 49 C/120 F. Store large amounts in structures made for OSHA Class I B liquids
Keep container tightly closed & upright when not in use to prevent leakage. OSHA Class I B liquids

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

EXPOSURE CONTROLS:
Ventilate to keep vapors of this material below 110 ppm. If over TLV, in accordance with 29 CFR 1910.134, use NIOSH approved positive-pressure self-contained breathing apparatus. Consult Safety Equipment Supplier. Use explosion-proof equipment.

VENTILATION:
LOCAL EXHAUST : Necessary
MECHANICAL (GENERAL) : Acceptable
SPECIAL : None
OTHER : None

PERSONAL PROTECTIONS:
Wear OSHA Standard goggles or face shield. Consult Safety Equipment Supplier. Wear gloves, apron & footwear impervious to this material. Wash clothing before reuse.

WORK & HYGIENIC PRACTICES:
Provide readily accessible eye wash stations & safety showers. Wash at end of each workshift & before eating, smoking or using the toilet. Promptly remove clothing that becomes contaminated. Destroy contaminated leather articles. Launder or discard contaminated clothing.
SECTION 9. PHYSICAL DATA

APPEARANCE: Liquid, Water-White
ODOR: Ketone
BOILING RANGE: 63 66 83 C / 147 152 182 F
AUTO IGNITION TEMPERATURE: 371 C / 700 F (Lowest Component)
LOWER FLAMMABLE LIMIT IN AIR (% by vol): 6.4
FLASH POINT (TEST METHOD): 4 C / 40 F (TCC)
FLAMMABILITY CLASSIFICATION: Class I B
GRAVITY @ 60 F:
    API: 47.0
    SPECIFIC GRAVITY (Water=1): .793
    POUNDS/GALLON: 6.603
VOC'S (>0.44 Lbs/Sq In): 100.2 Vol. % / 794.1 g/L / 6.614 Lbs/Gal
TOTAL VOC'S (TVOC): 100.1 Vol. % / 792.7 g/L / 6.603 Lbs/Gal
NONEXEMPT VOC'S (CVOC): 100.1 Vol. % / 792.7 g/L / 6.603 Lbs/Gal
HAZARDOUS AIR POLLUTANTS (HAPS): 73.0 Wt. % / 578.6 g/L / 4.819 Lbs/Gal
VAPOR PRESSURE (mm of Hg)@20 C 86.1
NONEXEMPT VOC PARTIAL PRESSURE (mm of Hg @ 20 C) 86.1
VAPOR DENSITY (air=1): 1.2
WATER ABSORPTION: Complete
REFRACTIVE INDEX: 1.338

SECTION 10. STABILITY & REACTIVITY

STABILITY: Stable
CONDITIONS TO AVOID:
Isolate from oxidizers, heat, sparks, electric equipment & open flame.
MATERIALS TO AVOID:
Isolate from strong oxidizers such as permanganates, chromates & peroxides.
HAZARDOUS DECOMPOSITION PRODUCTS:
Carbon Monoxide, Carbon Dioxide from burning.
HAZARDOUS POLYMERIZATION:
Will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>CAS #</th>
<th>TWA (OSHA)</th>
<th>TLV (ACGIH)</th>
<th>HAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>200 ppm S</td>
<td>200 ppm S</td>
<td>Yes</td>
</tr>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>1000 ppm</td>
<td>1000 ppm A4</td>
<td>No</td>
</tr>
<tr>
<td>Isopropanol</td>
<td>67-63-0</td>
<td>400 ppm</td>
<td>200 ppm A4</td>
<td>No</td>
</tr>
<tr>
<td>Methyl Isobutyl Ketone</td>
<td>108-10-1</td>
<td>100 ppm</td>
<td>50 ppm</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Each component showing 'Yes' under "HAP" is an EPA Hazardous Air Pollutant.
### SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>CAS #</th>
<th>CEILING</th>
<th>STEL (OSHA/ACGIH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>None Known</td>
<td>250 ppm</td>
</tr>
<tr>
<td>Isopropanol</td>
<td>67-63-0</td>
<td>None Known</td>
<td>400 ppm</td>
</tr>
<tr>
<td>Methyl Isobutyl Ketone</td>
<td>108-10-1</td>
<td>None Known</td>
<td>75 ppm</td>
</tr>
</tbody>
</table>

#### ACUTE HAZARDS

**EYE & SKIN CONTACT:**
- Primary irritation to skin, defatting, dermatitis.
- Primary irritation to eyes, redness, tearing, blurred vision.
- Liquid can cause eye irritation. Wash thoroughly after handling.

**INHALATION:**
- Anesthetic. Irritates respiratory tract. Acute overexposure can cause serious nervous system depression. Vapor harmful.
- Breathing vapor can cause irritation.
- Acute overexposure can cause damage to kidneys, blood, nerves, liver & lungs.
- Repeated exposure over TLV can cause blindness.

**SWALLOWING:**
- Can be fatal or cause blindness if swallowed. Cannot be made non-poisonous.
- POISON! Can cause irreversible nervous system damage & death.
- Harmful or fatal if swallowed.
- Swallowing can cause abdominal irritation, nausea, vomiting & diarrhea.

**CONDITIONS AGGREGATED:**
- Chronic overexposure can cause damage to kidneys, blood, nerves, liver & lungs.
- Persons with severe skin, liver or kidney problems should avoid use.

**CHRONIC HAZARDS**

**CANCER, REPRODUCTIVE & OTHER CHRONIC HAZARDS:**
- This product has no carcinogens listed by IARC, NTP, NIOSH, OSHA or ACGIH, as of this date, greater or equal to 0.1%.
- Absorption thru skin may be harmful. Studies with laboratory animals indicate this product can cause damage to fetus.
SECTION 12. ECOLOGICAL INFORMATION

MAMMALIAN INFORMATION:

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>CAS #</th>
<th>LOWEST KNOWN LD50 (ORAL)</th>
<th>LOWEST KNOWN LC50 (VAPORS)</th>
<th>LOWEST KNOWN LD50 (SKIN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>1000.0 mg/kg (Man)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Isopropanol</td>
<td>67-63-0</td>
<td>16000 ppm (Rats)</td>
<td></td>
<td>16400.0 mg/kg (Rabbits)</td>
</tr>
</tbody>
</table>

AQUATIC ANIMAL INFORMATION:

The most sensitive known marine group to any component of this product is:
Chub 250 ppm or mg/L (24 hour exposure).
Keep out of sewers and natural water supplies.

MOBILITY:
This material is a mobile liquid.

DEGRADABILITY:
This product is biodegradable.

ACCUMULATION:
This product does not accumulate or biomagnify in the environment.

SECTION 13. DISPOSAL CONSIDERATIONS

Recycle / dispose of observing national, regional, state, provincial and local health, safety & pollution laws. If questions exist, contact the appropriate agencies.

SECTION 14. TRANSPORT INFORMATION

DOT SHIPPING NAME: Alcohols, n.o.s., 3, UN1987, PG II
DRUM LABEL: (FLAMMABLE LIQUID)
IATA / ICAO: Alcohols, Flammable, Toxic, n.o.s. (Methanol, Ethanol), 3 (6.1), UN1986, PG-II
DRUM LABEL: (FLAMMABLE LIQUID & TOXIC)
IMO / IMDG: Alcohols, Flammable, Toxic, n.o.s. (Methanol, Ethanol), 3 (6.1), UN1986, PG-II
DRUM LABEL: (FLAMMABLE LIQUID & TOXIC)
EMERGENCY RESPONSE GUIDEBOOK NUMBER: 131
SECTION 15. REGULATORY INFORMATION

EPA REGULATIONS:

SARA SECTION 311/312 HAZARDS: Acute Health, Fire
All components of this product are on the TSCA list.

SARA Title III Section 313 Supplier Notification
This product contains the indicated <*> toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning & Community Right-To-Know Act of 1986 & of 40 CFR 372. This information must be included in all MSDSs that are copied and distributed for this material.

<table>
<thead>
<tr>
<th>SARA TITLE III INGREDIENTS</th>
<th>CAS#</th>
<th>WT. % (REG. SECTION)</th>
<th>RQ(LBS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>&lt;80 (311,312,313,RCRA)</td>
<td>5000</td>
</tr>
<tr>
<td>Methyl Isobutyl Ketone</td>
<td>108-10-1</td>
<td>&lt; 1 (311,312,313,RCRA)</td>
<td>5000</td>
</tr>
</tbody>
</table>

If > 6874 POUNDS OF THIS PRODUCT IS IN ONE CONTAINER THE "RQ" OF METHANOL IS EXCEEDED.

INTERNATIONAL REGULATIONS:
The components of this product are listed on the chemical inventories of the following countries:
Australia, Canada, Europe (EINECS), Japan, Korea, United Kingdom.

SECTION 16. OTHER INFORMATION

HAZARD RATINGS:
HEALTH (NFPA) : 1
HEALTH (HMIS) : 3
FLAMMABILITY  : 3
REACTIVITY    : 0

This information is intended solely for the use of individuals trained in the NFPA & HMIS hazard rating systems.

EMPLOYEE TRAINING:
Employees should be made aware of all hazards of this material (as stated in this MSDS) before handling it.

NOTICE
The supplier disclaims all expressed or implied warranties of merchantability or fitness for a specific use, with respect to the product or the information provided herein, except for conformation to contracted specifications. All information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations as to its accuracy or sufficiency. Conditions of use are beyond our control, and therefore users are responsible for verifying the data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product. Users also assume all risks in regards to the publication or use of, or reliance upon, 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 process.