1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity
Product Name: MAC'S 8700 CARB & CHOKE CLEANER CONC
General or Generic ID: MIXTURE-SOLVENTS

Company
The Valvoline Company
P.O. Box 14000
Lexington, KY 40512

Telephone Numbers
Emergency: 1-800-274-5263
Information: 1-606-357-7847

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>CAS Number</th>
<th>% (by volume)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOLUENE</td>
<td>108-88-3</td>
<td>43.0</td>
</tr>
<tr>
<td>METHYL ALCOHOL</td>
<td>67-56-1</td>
<td>33.0</td>
</tr>
<tr>
<td>ACETONE</td>
<td>67-64-1</td>
<td>15.0-25.0</td>
</tr>
<tr>
<td>DIACETONE ALCOHOL</td>
<td>123-42-2</td>
<td>0.0-9.0</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Potential Health Effects

Eye
Can cause eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes.
Additional symptoms of eye exposure may include: blurred vision

Skin
May cause mild skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, drying and cracking of skin, and skin burns.

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 enter the lungs during swallowing or vomiting and cause lung inflammation and/or damage.
Inhalation
Breathing of vapor or mist is possible.

Symptoms of Exposure
stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), and death.

Target Organ Effects
Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals, and may aggravate preexisting disorders of these organs in humans:
- liver abnormalities, anemia, spleen damage, nervous system damage, eye damage, kidney damage, lung damage, brain damage,
- Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans, and may aggravate preexisting disorders of these organs:
  - liver abnormalities, eye damage
- Toluene may be harmful to the fetus based on laboratory animal studies. Intentional misuse by deliberate inhalation of toluene has been associated with liver, kidney and brain damage in humans. Repeated exposure to toluene has been associated with high frequency hearing loss based on evidence in laboratory animals; the human health consequences of this finding is uncertain.

Developmental Information
No data

Cancer Information
No data

Other Health Effects
No data

Primary Route(s) of Entry
Inhalation, Skin absorption, Skin contact.

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. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

Swallowing
Call a physician or poison control center immediately for instructions. This material contains both methanol and petroleum distillates. Aspiration of material into the lungs due to vomiting can cause chemical pneumonitis which can be fatal.

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
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.

5. FIRE FIGHTING MEASURES

Flash Point
<.0 F (-17.7°C)

Explosive Limit
(for component) Lower 1.2 Upper 36.5 %

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
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.

NFPA Rating
Health - 2, Flammability - 3, Reactivity – 0

6. ACCIDENTAL RELEASE MEASURES

Small Spill
Absorb liquid on vermiculite, floor absorbent or other absorbent material.

Large Spill
Eliminate all ignition sources (flares, 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 run-off occurs, notify proper authorities as required, that a spill has occurred.

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.

Storage
Not applicable

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
Other protective equipment: not required under normal conditions of use., Wear resistant gloves such as: neoprene.

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 (consult 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
----------------------
TOLUENE (108-88-3)
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))
METHYL ALCOHOL (67-56-1)
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))
ACETONE (67-64-1)
OSHA VPEL 750.000 ppm - TWA
OSHA VPEL 1000.000 ppm - STEL
ACGIH TLV 500.000 ppm - TWA
ACGIH TLV 750.000 ppm - STEL

DIACETONE ALCOHOL (123-42-2)
OSHA VPEL 50.000 ppm - TWA
ACGIH TLV 50.000 ppm – TWA

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point
(for component) 133.0 F (56.1 C) @ 760 mmHg

Vapor Pressure
(for component) 185.000 mmHg @ 68.00 F

Specific Vapor Density > 1.000 @ AIR=1

Specific Gravity
.780 @ 77.00 F

Liquid Density
6.480 lbs/gal @ 77.00 F
.780 kg/1 @ 25.00 C

Percent Volatiles (Including Water)
100.0

Evaporation Rate
FASTER THAN ETHYL ETHER

Appearance
No data

State
LIQUID

Physical Form
HOMOGENEOUS SOLUTION

Color
CLEAR COLORLESS

Odor
No data

pH
Not applicable

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. Avoid heat, open flame, and prolonged storage at elevated temperatures.

Incompatibility
   Avoid contact with: strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION
   No data

12. ECOLOGICAL INFORMATION
   No data

13. DISPOSAL CONSIDERATION
   Waste Management Information
   Dispose of in accordance with all applicable local, state and federal regulations.

14. TRANSPORT INFORMATION
   DOT Information - 49 CFR 172.101
   DOT Description:
      FLAMMABLE LIQUIDS, N. O. S., 3, UN 1993,II
   Container/Mode:
      DRUMS/SURFACE - NO EXCEPTIONS
   NOS Component:
      TOLUENE
      ACETONE
   RQ (Reportable Quantity) - 49 CFR 172.101
   Product Quantity (lbs) Component
   --------------------------------------------------------------
      2225       TOLUENE
      16078      METHANOL
      26388      ACETONE

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

<table>
<thead>
<tr>
<th>Component</th>
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<tbody>
<tr>
<td>TOLUENE</td>
<td>1000</td>
</tr>
<tr>
<td>METHYL ALCOHOL</td>
<td>5000</td>
</tr>
<tr>
<td>ACETONE</td>
<td>5000</td>
</tr>
</tbody>
</table>

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

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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 reproductive harm.
TOLUENE

New Jersey RTK Label Information
TOLUENE 108-88-3
METHYL ALCOHOL 67-56-1
ACETONE 67-64-1
DIACETONE ALCOHOL 123-42-2

Pennsylvania RTK Label Information
BENZENE, METHYL- 108-88-3
METHANOL 67-56-1
2 - PROPNONE 67-64-1
2 - PENTANONE, 4 - HYDROXY- 4 - METHYL- 123-42-2

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.