Section 1 - Chemical Product and Company Identification

MSDS Name: 2-Methyl-2-butanol
Catalog Numbers: 16662-0000, 16662-0010, 16662-0025, 22023-0000, 22023-0010, 22023-0050
Synonyms: tert-Amyl alcohol

Company Identification:
Acros Organics BVBA
Janssen Pharmaceuticaalnaan 3a
2440 Geel, Belgium

Company Identification: (USA)
Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 800-ACROS-01
For information in Europe, call: +32 14 57 52 11
Emergency Number, Europe: +32 14 57 52 99
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300
CHEMTREC Phone Number, Europe: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#  Chemical Name: % EINECS#
75-85-4 2-Methyl-2-butanol >98.5% 200-908-9

Hazard Symbols: XN F

Risk Phrases: 11 20 37/38

Section 3 - Hazards Identification

EMERGENCY OVERVIEW
Highly flammable. Irritating to respiratory system and skin. Harmful by inhalation.

Potential Health Effects
Eye: May cause eye irritation. May result in corneal injury. Causes redness and pain.
Skin: Causes skin irritation. May be absorbed through the skin. Causes redness and
Ingestion: Harmful if swallowed. Causes gastrointestinal irritation with nausea, vomiting and diarrhea. Overexposure may cause methemoglobinemia.

Inhalation: Harmful if inhaled. Causes cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood). Causes respiratory tract irritation. May cause narcotic effects in high concentration.

Chronic: Chronic ingestion may cause liver damage. Chronic ingestion may cause central nervous system failure. May cause anemia and other blood cell abnormalities. Prolonged or repeated exposure may cause nausea, dizziness, and headache.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.

Skin: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Get medical aid. Wash mouth out with water.

Inhalation: If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Flammable liquid and vapor.

Extinguishing Media: Use water spray to cool fire-exposed containers. Use foam, dry chemical, or carbon dioxide.

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition. Use a spark-proof tool.

Section 7 - Handling and Storage

Handling: Use spark-proof tools and explosion proof equipment. Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes. Take precautionary measures against static discharges.

Storage: Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container. Flammables-area.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash
facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

CAS# 75-85-4:

Germany: 360 mg/m3 TWA

Personal Protective Equipment

Eyes: Wear safety glasses and chemical goggles if splashing is possible.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear a chemical apron.

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Clear liquid
Color: colorless
Odor: camphor
pH: 6.0 (118 g/L aq.sol.)
Vapor Pressure: 12 mbar @ 20 deg C
Viscosity: 3.7 mPa s @ 25 deg C
Boiling Point: 102 deg C @ 760 mmHg (215.60°F)
Freezing/Melting Point: -12 deg C (10.40°F)
Autoignition Temperature: 435 deg C (815.00 deg F)
Flash Point: 20 deg C (68.00 deg F)
Explosion Limits: Lower: 1.3 Vol %
Explosion Limits: Upper: 9.6 Vol %
Decomposition Temperature: Not available
Solubility in water: 120 g/l (20°C)
Specific Gravity/Density: 0.800
Molecular Formula: C5H12O
Molecular Weight: 88.15

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures. Light sensitive.
Conditions to Avoid: High temperatures, incompatible materials, light, ignition sources.
Incompatibilities with Other Materials: Strong oxidizing agents, alkali metals.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#: CAS# 75-85-4: SC0175000

RTECS:
CAS# 75-85-4: Oral, rabbit: LD50 = 2028 mg/kg;
LD50/LC50:
Oral, rat: LD50 = 1 gm/kg;
Oral, rat: LD50 = 1000 mg/kg;

2-Methyl-2-butanol - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other:

Section 12 - Ecological Information

Ecotoxicity: Daphnia: EC50: 540 mg/L; 48H; .
Fish: Leuciscus idus: LC50: 2430 mg/L; 48H; .

Section 13 - Disposal Considerations
Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

<table>
<thead>
<tr>
<th>IATA</th>
<th>IMO</th>
<th>RID/ADR</th>
</tr>
</thead>
<tbody>
<tr>
<td>PENTANOLS</td>
<td>PENTANOLS</td>
<td>PENTANOLS</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>1105</td>
<td>1105</td>
<td>1105</td>
</tr>
<tr>
<td>II</td>
<td>II</td>
<td>II</td>
</tr>
</tbody>
</table>

Section 15 - Regulatory Information
European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN F

Risk Phrases:
  R 11 Highly flammable.
  R 20 Harmful by inhalation.
  R 37/38 Irritating to respiratory system and skin.

Safety Phrases:
  S 46 If swallowed, seek medical advice immediately and show this container or label.

WGK (Water Danger/Protection)
  CAS# 75-85-4: 1

Canada
  CAS# 75-85-4 is listed on Canada's DSL List

US Federal

TSCA
  CAS# 75-85-4 is listed on the TSCA Inventory.

Section 16 - Other Information
MSDS Creation Date: 7/16/1996
Revision #2 Date 6/07/2005
Revisions were made in Sections: General revision.

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantibility or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.