Material Safety Data Sheet
DL-2-Methyl-1-Butanol, 98%

ACC# 52450

Section 1 - Chemical Product and Company Identification

**MSDS Name:** DL-2-Methyl-1-Butanol, 98%
**Catalog Numbers:** AC158270000, AC158270010, AC158270025, AC158270250, AC158271000
**Synonyms:**

**Company Identification:**
Acros Organics N.V.
One Reagent Lane
Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01
For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
<th>EINECS/ELINCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>137-32-6</td>
<td>DL-2-Methyl-1-Butanol</td>
<td>98%</td>
<td>205-289-9</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

**EMERGENCY OVERVIEW**

Appearance: clear, colorless liquid. Flash Point: 43 deg C.

**Warning! Flammable liquid and vapor.** May be harmful if swallowed. May cause eye and skin irritation. May cause respiratory tract irritation.

**Target Organs:** None known.

**Potential Health Effects**
**Eye:** Vapors may cause eye irritation.
**Skin:** May cause skin irritation.
**Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May be harmful if swallowed.
**Inhalation:** May cause respiratory tract irritation. Vapors may cause dizziness or suffocation.
**Chronic:** Not available.

Section 4 - First Aid Measures

**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
**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. Vapors mixed with air can explode when ignited. Flammable liquid and vapor. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

**Extinguishing Media:** Use water spray to cool fire-exposed containers. Use water fog, dry chemical, carbon dioxide, or regular foam.
**Flash Point:** 43 deg C (109.40 deg F)
**Autoignition Temperature:** 340 deg C (644.00 deg F)
**Explosion Limits, Lower:** 1.10 vol %
**Upper:** 9.30 vol %
**NFPA Rating:** (estimated) Health: ; Flammability: 2; Instability:

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**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.

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**Section 7 - Handling and Storage**

**Handling:** Wash thoroughly after handling. Use only in a well-ventilated area. Ground and bond containers when transferring material. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.
**Storage:** Keep away from heat, sparks, and flame. Keep away from sources of ignition. Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area.

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**Section 8 - Exposure Controls, Personal Protection**

**Engineering Controls:** Use adequate ventilation to keep airborne concentrations low.
**Exposure Limits**

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https://fscimage.fishersci.com/msds/52450.htm
OSHA Vacated PELs: DL-2-Methyl-1-Butanol: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: 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: Liquid
Appearance: clear, colorless
Odor: Stench.

pH: Not available.
Vapor Pressure: 3 mm Hg @20 deg C

Vapor Density: 3.0
Evaporation Rate: 4.18 kJ/kg (20°C)
Viscosity: 5.1 mPas 20 deg C
Boiling Point: 130 deg C @ 760.00mm Hg

Freezing/Melting Point: -70 deg C
Decomposition Temperature: Not available.

Solubility: 3.6 G/100 ML WATER (30°C)
Specific Gravity/Density: 0.8150g/cm3

Molecular Formula: C5H12O
Molecular Weight: 88.15

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, ignition sources, electrical sparks, exposure to flame.

Incompatibilities with Other Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#: 
CAS# 137-32-6: EL5250000

LD50/LC50:
CAS# 137-32-6:
  Skin, rabbit: LD50 = 3540 uL/kg;
Carcinogenicity:
CAS# 137-32-6: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No data available.
Teratogenicity: No data available.
Reproductive Effects: No data available.
Mutagenicity: No data available.
Neurotoxicity: No data available.
Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. Water danger/protection: WGK 1
Environmental: No information available.
Physical: No information available.
Other: No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

<table>
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<tr>
<th>US DOT</th>
<th>Canada TDG</th>
</tr>
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<tbody>
<tr>
<td>Shipping Name:</td>
<td>PENTANOLS</td>
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<tr>
<td>Hazard Class:</td>
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</tr>
<tr>
<td>UN Number:</td>
<td>UN1105</td>
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<tr>
<td>Packing Group:</td>
<td>III</td>
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<td></td>
<td>No information available.</td>
</tr>
</tbody>
</table>

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 137-32-6 is listed on the TSCA inventory.

Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
   None of the chemicals in this product are under a Chemical Test Rule.

Section 12b
   None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule
   None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs
   None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances
   None of the chemicals in this product have a TPQ.

Section 313
   No chemicals are reportable under Section 313.

Clean Air Act:
   This material does not contain any hazardous air pollutants.
   This material does not contain any Class 1 Ozone depleters.
   This material does not contain any Class 2 Ozone depleters.

Clean Water Act:
   None of the chemicals in this product are listed as Hazardous Substances under the CWA.
   None of the chemicals in this product are listed as Priority Pollutants under the CWA.
   None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:
   None of the chemicals in this product are considered highly hazardous by OSHA.

STATE
   CAS# 137-32-6 can be found on the following state right to know lists: Pennsylvania, Massachusetts.

California Prop 65
   California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:
   XN

Risk Phrases:
   R 10 Flammable.
   R 20/22 Harmful by inhalation and if swallowed.

Safety Phrases:
   S 16 Keep away from sources of ignition - No smoking.
   S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
   S 39 Wear eye/face protection.

WGK (Water Danger/Protection)
   CAS# 137-32-6: No information available.

Canada - DSL/NDSL
   CAS# 137-32-6 is listed on Canada's DSL List.

Canada - WHMIS
   This product has a WHMIS classification of B3.
   This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List
Section 16 - Additional Information

**MSDS Creation Date:** 4/16/1998  
**Revision #4 Date:** 11/20/2008

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