# International Chemical Safety Cards

## ISOBUTYRALDEHYDE

**ICSC: 0902**

**CAS # 78-84-2**  
**RTECS # NQ4025000**  
**ICSC # 0902**  
**UN # 2045**

### TYPES OF HAZARD/EXPOSURE

<table>
<thead>
<tr>
<th>FIRE</th>
<th>ACUTE HAZARDS/SYMPHOMS</th>
<th>PREVENTION</th>
<th>FIRST AID/FIRE FIGHTING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Highly flammable. Gives off irritating or toxic fumes (or gases) in a fire.</td>
<td>NO open flames, NO sparks, and NO smoking.</td>
<td>Powder, AFFF, foam, carbon dioxide.</td>
</tr>
<tr>
<td>EXPLOSION</td>
<td>Vapour/air mixtures are explosive.</td>
<td>Closed system, ventilation, explosion-proof electrical equipment and lighting. Do NOT use compressed air for filling, discharging, or handling.</td>
<td>In case of fire: keep drums, etc., cool by spraying with water.</td>
</tr>
</tbody>
</table>

### EXPOSURE

<table>
<thead>
<tr>
<th>EXPOSURE</th>
<th>HAZARD/INJURY</th>
<th>PREVENTION</th>
<th>FIRST AID/FIRE FIGHTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>INHALATION</td>
<td>Sore throat. Cough. Burning sensation. Shortness of breath. Laboured breathing. Symptoms may be delayed (see Notes).</td>
<td>Ventilation, local exhaust, or breathing protection.</td>
<td>Fresh air, rest. Artificial respiration if indicated, and refer for medical attention.</td>
</tr>
<tr>
<td>EYES</td>
<td>Pain. Redness. Severe deep bums. Loss of vision. ALTI</td>
<td>Safety goggles. Face shield.</td>
<td>First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.</td>
</tr>
<tr>
<td>INGESTION</td>
<td>Burning sensation. Abdominal cramps. Shock or collapse</td>
<td>Do not eat, drink, or smoke during work.</td>
<td>Rinse mouth. Do NOT induce vomiting. Give plenty of water to drink, and refer for medical attention.</td>
</tr>
</tbody>
</table>

### SPILLAGE DISPOSAL

Evacuate danger area in case of large spills. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent and remove to safe place. Do NOT wash away into sewer (extra personal protection).

### STORAGE

Fireproof. Separated from strong oxidants, strong bases, strong acids, strong reducing agents. Well closed.

### PACKAGING & LABELLING

UN Haz Class: 3  
UN Pack Group: II
International Chemical Safety Cards

**ISOBUTYRALDEHYDE**

**PHYSICAL STATE; APPEARANCE:**
COLOURLESS LIQUID, WITH PUNGENT ODOUR.

**PHYSICAL DANGERS:**
The vapour is heavier than air and may travel along the ground; distant ignition possible.

**CHEMICAL DANGERS:**
The substance decomposes on heating or on burning producing acrid smoke and fumes. Reacts with oxidants, strong reductants and strong bases.

**OCCUPATIONAL EXPOSURE LIMITS (OELs):**
TLV not established.
MAK not established.

**PHYSICAL PROPERTIES**
Boiling point: 63–64°C
Melting point: -65°C
Relative density (water = 1): 0.8
Solubility in water, g/100 ml at 20°C: 6.7
Vapour pressure, kPa at 20°C: 15.3
Relative vapour density (air = 1): 2.5
Relative density of the vapour/air-mixture at 20°C (air = 1): 1.2
Flash point: -25°C
Auto-ignition temperature: 196°C
Explosive limits, vol% in air: 1.6–10.6
Octanol/water partition coefficient as log Pow: 1.2

**ENVIRONMENTAL DATA**

**NOTES**
The symptoms of lung oedema often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation are therefore essential. Immediate administration of an appropriate spray, by a doctor or a person authorized by him/her, should be considered. Rinse contaminated clothes (fire hazard) with plenty of water.

Transport Emergency Card: TEC (R)-693
NFPA Code: H2; F3; R1;

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