Material Safety Data Sheet

The content and format of this SDS is accordant with GHS standard.

1. Identification of the substance/preparation and of the company/undertaking

Product name: Mixed alcohol R7
Application of the substance: Industrial use.
Manufacturer/Supplier: ********
Address: ********
Tel: ********
Fax: ********
Further information obtainable from: ********
Information in case of emergency:
Tel: ********

2. Hazards identification

GHS classification according to Annex II:

<table>
<thead>
<tr>
<th>Health hazards</th>
<th>Environmental hazards</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious eye damage/eye irritation- 2A</td>
<td>Not classified.</td>
<td>Flammable liquids- 2</td>
</tr>
<tr>
<td>Skin corrosion/irritation-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STOT SE-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute toxicity-5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Signal word: Danger

Symbol:

Hazard Statement:

H225: Highly flammable liquid and vapour.
H319: Causes serious eye irritation.
H315: Causes skin irritation.
H335: May cause respiratory irritation
H336: May cause drowsiness or dizziness
H303: May be harmful if swallowed.

Precautionary Statements:

P210 – Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
P241: Use explosion-proof electrical/ventilating/light/…/equipment.
P242: Use only non-sparking tools.
P243: Take precautionary measures against static discharge.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P264: Wash hands thoroughly after handling.
P261: Avoid breathing fume/gas/mist/vapours/spray.
P270: Do not eat, drink or smoke when using this product.

**Response Precautionary Statements:**
- P370+380+376+378: In case of fire: Evacuate area, stop leak if safe to do so, use proper fire-extinguishers (e.g. alcohol-resistant foam, dry powder, CO₂) for extinction.
- P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+313: If eye irritation persists, get medical advice/attention.
- P303+361+353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+312: IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.

**Storage precautionary statements:**
- P403+235: Store in a well ventilated place. Keep cool.
- P410: Protect from sunlight.

**Disposal precautionary statements:**
- P501: Dispose of contents/container to relevant local and national regulations.

### 3. Composition/information on ingredients

**Product description:** This product is a mixture.

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS</th>
<th>EINECS</th>
<th>% by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>200-578-6</td>
<td>86.2%</td>
</tr>
<tr>
<td>1-propanol</td>
<td>71-23-8</td>
<td>203-550-1</td>
<td>9.4%</td>
</tr>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>200-659-6</td>
<td>2.3%</td>
</tr>
<tr>
<td>Isopropanol</td>
<td>67-63-0</td>
<td>200-661-7</td>
<td>1.5%</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>--</td>
<td>0.2%</td>
</tr>
<tr>
<td>Others</td>
<td>--</td>
<td>--</td>
<td>0.4%</td>
</tr>
</tbody>
</table>

### 4 First aid measures

Persons using this product should consult a physician or other medical professional if an accident involving this product in injury. Specific first-aid measures are as follows:

- **Eyes Contact:** Immediately raise eyelids and flush with plenty of water at least for 15 mintues. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists, seek medical care.
- **Skin Contact:** Immediately water contaminated area with plenty of water and soap. Remove all contaminated clothing and wash thoroughly before reuse.
- **Inhalation:** Remove to fresh air. Call a POISON CENTER or doctor/physician if you feel unwell.
- **Ingestion:** Do not induce vomiting without professional instruction. Get medical attention immediately.

### 5. Fire-fighting measures

- **Flash point:** < 20°C (68°F)
- **Flammable/Explosive Limits-Lower Vol:** Not determined.
6. Accidental release measures

Personal precautions: Use proper personal protective equipment as indicated in Section 8.

Measures for Cleaning/Collection:

Small Spill:
Mop up or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill:
Keep away from heat and sources of ignition. Stop leak if without risk. Absorb with dry earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers or confined areas.

Environmental Precautions: Keep cleaning run-offs out of municipal sewers and open bodies of water. Comply with local and national laws and regulations.

7. Handling and storage

Handling:
Do not breathe vapor or fume that may be evolved during processing.
Workers must wear proper protective equipments and must operate strictly according to relative rules.

Information about fire- and explosion protection:
Keep ignition sources away—Do not smoke.

Storage:
Requirements to be met by storerooms: Store it in a well-ventilated, cool and dry store room.
Additional Information: The storeroom should be equipped with proper facilities for accidental leakage and fire.

8. Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>OSHA PEL-TWA</th>
<th>ACGIH TLV-TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol (64-17-5)</td>
<td>1000 ppm</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>1-propanol (71-23-8)</td>
<td>200 ppm</td>
<td>Not available</td>
</tr>
<tr>
<td>Methanol (67-56-1)</td>
<td>200 ppm</td>
<td>250 ppm</td>
</tr>
<tr>
<td>Isopropanol (67-63-0)</td>
<td>100 ppm</td>
<td>400 ppm</td>
</tr>
</tbody>
</table>

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate vapor or fume, use ventilation to keep exposure to airborne contaminants below the exposure limit.
.Personal Protective Equipments:

. Protection of Hands:
Recommend wearing protective gloves.

. Protection of Eyes:
No special requirements under normal conditions. Wear safety glasses when liquid may contact eyes.

. Respiratory Protection: Use an approved respirator if exposure limits are exceeded or if irritation or other symptoms occur.

. Protection of Body:
Recommend wearing uniforms.

. General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>.General Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>. Form: Liquid</td>
</tr>
<tr>
<td>. Color: Transparent and colorless</td>
</tr>
<tr>
<td>. Odor: Characteristic</td>
</tr>
<tr>
<td>. Boiling Range: 78 °C (172° F) (Ethanol)</td>
</tr>
<tr>
<td>. Melting point/Melting range: Not available</td>
</tr>
<tr>
<td>. Flash point: &lt;20°C (68° F)</td>
</tr>
<tr>
<td>. Self-igniting: Not available</td>
</tr>
<tr>
<td>. Relative Density ( @20°C) : 0.78g/cm³ (water=1)</td>
</tr>
<tr>
<td>. Vapor density: 1.59 (air=1)</td>
</tr>
<tr>
<td>. Vapor pressure: 5.878 kPa ( @20°C)</td>
</tr>
<tr>
<td>. Solubility in/Miscibility with Water: Soluble</td>
</tr>
<tr>
<td>. PH-Value ( @25°C) : Not available</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

. Chemical Stability: Stable under normal temperatures and pressures.

.Materials to avoid: Strong oxidizing agents, acids, acid anhydride, alkali metals and amine.
.Hazardous Polymerizations: Will not occur.
.Conditions to Avoid: Heat and ignition sources (flames, sparks, static).

11. Toxicological information
.Product Toxicity Data: The toxicity data of this product has not been determined by testing or research, but to our best knowledge, this product is minimally toxic. The toxicity data shown below is for reference only.

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS</th>
<th>LD 50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>Acute Oral LD50: 9,000mg/kg (rat)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute Oral LD50: 3,450mg/kg (mouse)</td>
</tr>
<tr>
<td>1-propanol</td>
<td>71-23-8</td>
<td>Acute Oral LD50: 1,870mg/kg (rat)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute Oral LD50: 6,800mg/kg (mouse)</td>
</tr>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>Acute Oral LD50: 5,628mg/kg (rat)</td>
</tr>
<tr>
<td>Isopropanol</td>
<td>67-63-0</td>
<td>Acute Oral LD50: 5,600mg/kg (rat)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute Oral LD50: 7,300mg/kg (mouse)</td>
</tr>
</tbody>
</table>

.Main Routes of Exposure: Skin, eyes and ingestion.
.Contact with Eyes: It can cause serious irritation to eyes and symptoms may include redness, tear and ache.
.Contact with Skin: Irritant to skin. For long-time or repeated contact, it can cause skin dryness.
.Inhalation: Under normal conditions of use and handling, no inhalation hazard is present. It may cause irritation to respiratory system if inhaling concentrated vapor of this liquid. Symptoms may include coughing, drowsiness, dizziness and tightness in chest.
.Ingestion: Harmful by ingestion. May cause irritation to intestinal tract, stomach, liver and kidney. Symptoms may include nausea, vomiting, bellyache and diarrhea.
.Effects of Overexposure – Chronic: If the skin is exposed for an extended period, it can be absorbed through the skin and cause harmful, but reversible.
.Carcinogenicity: Not found.
.Sensitivity: Not found.
.Teratogenicity: Not found.
.Mutagenicity: Not found.
.Irritation Data:
CAS: 64-17-5
Draize test, rabbit, eye: 500 mg severe; rabbit, skin:20 mg/24H moderate
CAS: 71-23-8
Draize test, rabbit, eye: 20 mg/24H moderate
CAS: 67-63-0
Draize test, rabbit, eye: 40 mg moderate; rabbite, skin: 20 mg/24H moderate

12. Ecological information
.Ecotoxicity: Not available
.Persistence and Degradability: This product is biodegradable.
.Bioaccumulative Potential: Not found.
.Mobility in Soil: No relevant data.
.Notes:
Do not allow product to reach ground water, water course or sewage system.

13. Disposal considerations
Do not allow product to reach sewage system.
Do not throw it into any open bodies of water.
Waste recycling must be operated strictly according to relevant regulations.

14. Transport Information

DOT:
.Proper Shipping Name: Alcohols, n.o.s
.Hazard Class: Class 3
.UN Code: UN 1987
.Packing Group: II

Air-Transportation- IATA/ICAO:
.Proper Shipping Name: Alcohols, n.o.s
.Hazard Class: Class 3
.UN Code: UN 1987
.Packing Group: II

Sea-Transportation-IMO/IMDG:
.Proper Shipping Name: Alcohols, n.o.s
.Hazard Class: Class 3
.UN Code: UN 1987
.Packing Group: II

Note:
Check whether the package is completed or sealed before transporting; make sure there are no damage and no falling down of packages during transporting; the transport vehicle should be equipped with fire-fighting equipments and emergency facilities for handling with release; do NOT transport this product together with incompatible substances.

15. Regulatory information
.TSCA (Toxic Substance Control Act): All components of this product are in compliance with the inventory listing requirements of U.S. Toxic Substances Control Act Chemical Substance Inventory.
.67/548/EECAnnex III:
**Risk Phrase:**
R11: Highly flammable.
R41: Risk of serious damage to the eyes.
R65: Harmful: may cause lung damage if swallowed.
R66: Repeated exposure may cause skin dryness or cracking.
R67: Vapours may cause drowsiness and dizziness.

**Safety Phrase:**
S2: Keep out of the reach of children.
S7: Keep container tightly closed.
S15: Keep away from heat.
S16: Keep away from sources of ignition - No smoking.
S17: Keep away from combustible material.
S25: Avoid contact with eyes.
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S62: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

**HMIS-Rating (0-4)HMIS:**

<table>
<thead>
<tr>
<th>Health</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>3</td>
</tr>
<tr>
<td>Reactivity</td>
<td>1</td>
</tr>
</tbody>
</table>

**Rating:**
Least rate high

Health = 2; Flammability = 3; Reactivity =1

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**16. Other information**

**DISCLAIMER:** This data contained herein are furnished for information only and are believed to be reliable. However, Japan Alcohol Sales Company Limited. doesn’t assume responsibility for any results obtained by persons over whose methods are not controlled. It is the user's responsibility to determine the suitability of products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of this product. Japan Alcohol Sales Company Limited. further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

**References:**
GHS Annex II
GHS SDS Instruction

**Full description of some acronyms:**

GHS-Globally Harmonized System of Classification and Labelling of Chemicals
CAS-Chemical Abstracts Service
EINECS-European Inventory of Existing Commercial Chemical Substances
IMO-International Maritime Organization
IMDG-International Maritime Dangerous Goods
IATA-International Air Transport Association
ICAO-International Civil Aviation Organization
TSCA-Toxic Substance Control Act
OSHA-Occupational Safety and Health Administration
ACGIH- American Conference of Governmental Industrial Hygienists

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