# SAFETY DATA SHEET
## Key Surgical® Adhesive Remover

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE OR PREPARATION AND OF THE COMPANY

<table>
<thead>
<tr>
<th>Manufacturer Name:</th>
<th>Key Surgical Inc.</th>
<th>Emergency Phone No:</th>
<th>Customer Service: 800.541.7995</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address:</td>
<td>8101 Wallace Rd.</td>
<td>Eden Prairie, MN 55344</td>
<td></td>
</tr>
<tr>
<td>Synonyms, Trade Names:</td>
<td>Orange oil based cleaning agent, Adhesive Remover</td>
<td>Product Type:</td>
<td>Cleaning agent</td>
</tr>
<tr>
<td>Key Surgical Part:</td>
<td>MJ-7004, MJ-7032</td>
<td>Formula Code:</td>
<td>FLCIDDOX</td>
</tr>
<tr>
<td>Identified Uses:</td>
<td>Removes sticky residues</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## SECTION 2: HAZARDOUS IDENTIFICATION according to Regulation 1272/2008

### 2.1 Classification of the substance or mixture:

According to regulation 1272/2008:
- Flammable liquid cat. 3 – H226
- Skin irritation cat. 2 – H315
- Skin sensitisation cat. 1 – H317
- Aspiration toxicity cat. 1 – H304
- Short-term aquatic hazardous cat. 1 – H400
- Long-term aquatic hazardous cat. 1 – H410

According to EC directive 1999/45:
- N, Xi R10 – Flammable
- R38 – Irritating to skin
- R 43 May cause sensitization by skin contact.
- R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### 2.2 Label elements:

According to regulation 1272/2008:
- Pictograms: GHS02, GHS07, GHS08, GHS09

### 2.3 Other hazards:

#### Most important hazards:
- Vapor may form an explosive mixture in the atmosphere.
- Potential for formation of explosive vapor, may cause allergic effects on skin.

#### Phrases according to EC directive 1999/45:
- S2 - Keep out of reach of children.
- S23 - Do not breathe vapor.
- S24/25 - Avoid contact with skin and eyes.
- S37/39 - Wear suitable gloves and eye/face protection.
- S60 - This material must be disposed as hazardous waste.
- S61 - Avoid release to the environment.
SAFETY DATA SHEET
Key Surgical® Adhesive Remover

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Description: Chemical blend

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>% w/w</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrocarbons, C11-C13, isoalkanes, &lt; 2%aromatics</td>
<td>64742-47-8</td>
<td>920-901-1</td>
<td>15-20</td>
<td>H304</td>
</tr>
<tr>
<td>Hydrocarbons, C12-C16, isoalkanes, cyclics &lt; 2%aromatics</td>
<td>64742-47-8</td>
<td>927-676-8</td>
<td>50-60</td>
<td>-</td>
</tr>
<tr>
<td>Isopropylamine Dodecylbenzene Sulfonate</td>
<td>68649-00-3</td>
<td>272-018-9</td>
<td>5-6</td>
<td>H315</td>
</tr>
</tbody>
</table>

SECTION 4: FIRST AID MEASURES

4.1 Description of First-Aid-Measures

**Inhalation:**
Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

**Eye Contact:**
Remove contacts. Flush with water for at least 20 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

**Skin Contact:**
Thoroughly wash exposed skin with soap and water. Remove any contaminated clothing and wash before reuse.

**Ingestion:**
Wash out mouth with water. Drink plenty of water. Do not induce vomiting unless directed by medical personnel. Never give anything to an unconscious person. Get medical aid.

4.2 Symptoms and Effects, both acute and delayed

**Inhalation:**
May cause respiratory tract irritation. Lung and respiratory tract may be hurt if substance is inhaled in high amounts.

**Eye Contact:**
Irritating to eyes.

**Skin Contact:**
Causes skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material (d-limonene). Prolonged and/or repeated contact may cause defatting of the skin and dermatitis.

**Ingestion:**
May cause digestive tract disturbances. In case of ingestion negative effects also to respiratory tract may be expected due to aspiration toxicity.

4.3 Indication of any immediate medical attention and special treatment needed

**Treatment:**
Treat symptomatically

SECTION 5: FIRE AND EXPLOSION HAZARD DATA

**Suitable Extinguishing Media:**
Any standard extinguishing media (alcohol foam, water spray or fog, CO2 dry chemical, etc.).

**Unsuitable Extinguishing Media:**
None known.

**Special hazards arising from the substance or mixture:**
Possibly oxides of carbon and unidentified organic compounds. Vapors are heavier than air and may travel to a source of ignition and travel back. Vapors can spread along the ground and collect in low or confined areas. This liquid might float on water and may travel to a source of ignition and spread fire.

**Special Fire Fighting Procedures:**
Substance does not mix with water and has density less than water.

**Special Protective Equipment for Fire Fighters:**
Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces. Self-contained positive pressure breathing apparatus is needed.

SECTION 6: ACCIDENTAL RELEASE MEASURES

**Personal Precautions, protective equipment and emergency procedures:**
Do not take internally. Prevent eye and skin contact. Refer to section 8 of the SDS for Personal Protective Equipment.

**Environmental Precautions:**
Avoid release to the environment. Dispose of according to local regulations.

**Methods and material for containment and cleaning up:**
Use absorbent material to soak up spills. Then place in suitable container. Forms smooth, slippery surfaces on floors, posing an accident risk. Remove all sources of ignition. Sweep up and dispose of in according to local regulations. Collect and dispose of spillage as indicated in section 13 of the SDS.

SECTION 7: HANDLING AND STORAGE

**Precautions for safe handling:**
Keep away from sources of ignition. 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. Keep away from heat, sparks and flame. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Use only with adequate ventilation. Avoid breathing vapor or mist.

**Conditions for safe storage, including any incompatibilities:**
Store in cool, dry place, Keep container closed to avoid contamination.
SAFETY DATA SHEET

Key Surgical® Adhesive Remover

Specific end use(s): Application as cleaning agent

Incompatible Storage: None known
Other: None known

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters: None
Occupational exposure limits: None

8.1 Exposure Controls:
Appropriate engineering controls: Use local exhaust or dilution ventilation.

Personal protective equipment:
Eye: Safety glasses or safety goggles.
Hand: Chemical resistant gloves.
Respiratory: In case of regular applications and amounts used no respiratory equipment is necessary.
Skin: Cover body with clothing.
Working Hygiene: Take usual precautions when handling. Workers should wash hands before eating, drinking or smoking.

Environmental exposure controls: Avoid release to the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Orange liquid
Odor: Typical-citrus

Boiling Point/Boiling Range: Not measured
pH: Not applicable

Color: Orange
Color in Water: Non-Soluble

Flash point: 48 °C (Flash Point, °C PM Closed Cup ASTM D93) estimate for lowest in composition
Relative density: 0.814 g/cc

Inflammation: Flash point not established. Hydrocarbon > 63 °C (142 °F) ASTM D-56 Hydrocarbon > 94 °C (200 °F) ASTM D-93 d-limonene 48 °C (118.4 °F)
% VOC: <20%

Vapor Pressure: Not measured
Decomposition Temperature: Not measured

Vapor density (aire=1): Not measured

Form: Liquid
Melting Temperature: Not measured

SECTION 10: STABILITY AND REACTIVITY

Reactivity: The mixture does not contain any reactive substance.
Conditions to Avoid: Heat and sources of ignition, prolonged exposure to air
Chemical Stability: The mixture contains no stabilizers. If stored under regular conditions no extraordinary reactions are expected. Static discharge, open fire (smoking) etc. should be avoided in respect to flammability.
Possibility of hazardous reactions: Hazardous reactions may occur in presence of oxidising substances or strong acids or bases.
Incompatible materials: Strong oxidizing agents, strong acids and bases.

Hazardous Decomposition of Materials: See Section 5, Special Exposure Hazards

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity:

| Hydrocarbons C11-C16 (CAS: 64742-47-8) | LD50 oral rat > 15 000 mg/kg |
| d-limonene (CAS: 5989-27-5) | LD50 oral rat 4400 mg/kg |
| | LD50 dermal rabbit > 5 mg/kg |
| Isopropylamine Dodecylbenzene Sulfonate (CAS 68649-00-3) | No toxicological results available. |

Local effects: Skin effects for exposed and non-exposed areas are possible.

Chronic Toxicity: d-limonene: in 2-year gavage studies, there was clear evidence of carcinogenic activity of d-limonene for male rats, as shown by increased incidences of tubular cell hyperplasia, adenomas, and adenocarcinomas of the kidney. There was NO evidence of carcinogenic activity of d-limonene for female rats, for male mice, or for female mice.

Sensitization: Allergic skin reaction in respect to d-limonene contact are possible.
Specific effects: No significant effects or critical hazards
SECTION 12: ECOLOGICAL INFORMATION

Toxicity: Long-term toxic to aquatic life

Bioaccumulative potential: General notes: The surfactant(s) contained in this preparation complies (comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer. In accordance with the requirements of the Renewable Volume Obligation (RVO) in the Act on Detergents and Cleansing Agents, tensides are biodegradable up to at least 90%.

Persistence/Degradability: Data not available, surfactant is biodegradable under OECD 301 D. Based on data of ingredients full formulation would be expected to be biodegradable. Naptha based on raw material manufacturer’s information is biodegradable.

Mobility in soil: Not determined for the mixture

Results of PBT and vPvB assessment: Preparation does meet the criteria for PBT or vPvB in accordance with REACH Annex XII

SECTION 13: DISPOSAL INFORMATION

Waste treatment methods: Product: Dispose of waste in an appropriate authorised treatment facility in accordance with regulations in force and product characteristics at time of disposal. (for example, energy recovery).

Packaging material: Single use packaging. Collect for salvage or disposal.

SECTION 14: TRANSPORTATION INFORMATION

DOT regulated Class 3 Flammable liquid NOS (d-limonene) UN 1993, PG III

UN number UN 1993

UN Shipping name flammable Liquid (d-Limonene)

Transport hazard class(es) Class 3

Packaging group III

Environmental hazards The mixture is environmentally hazardous

Special precautions for user: Avoid smoking and any other ignition source

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code.

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

This safety data sheet conforms to regulation (EU) n°453/2010 amending annex II of regulation (EC) No 1907/2006 (REACH)

Product name: Adhesive Remover

SECTION 16: OTHER INFORMATION

The manufacturer warrants that this product conforms to its standard specification when used according to direction. To the best of our knowledge the information contained herein is accurate. However we do not assume accuracy or completeness of the information contained herein.

Final determination of the suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.