SAFETY DATA SHEET (SDS)  
according to 1907/2006/EC, Article 31

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Trade name: 952-D6 Soldering Flux

Article number: C7-00-952D6

Relevant identified uses of the substance or mixture and uses advised against
Solder
Professional use of solder

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Kester Inc.
800 West Thorndale Avenue
Itasca, IL 60143
Tel 00+1 + 630 616 4000

ITW Specialty Materials (Suzhou) Co., Ltd.
Hengqiao Road, Wujiang Economic Development Zone
Suzhou, Jiangsu Province, China 215200
Tel +86 512 82060807

Kester GmbH
Ganghofer Strasse 45
D-82216 Gernlinden Germany
Tel +49 (0) 8142 4785 0

Further information obtainable from:
Product Compliance: EHS_Kester@kester.com

1.4 Emergency telephone number:
CHEMTREC 24-Hour Emergency Response  Telephone Number : (800) 424-9300
CHEMTREC 24-Hour Emergency Response (Outside US & Canada) Telephone Number : (703) 527-3887

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008

GHS02 flame

Flam. Liq. 2   H225 Highly flammable liquid and vapour.

GHS08 health hazard

Resp. Sens. 1   H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

GHS07

Acute Tox. 4   H302 Harmful if swallowed.
Acute Tox. 4   H312 Harmful in contact with skin.
STOT SE 3   H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

2.2 Label elements
Labelling according to Regulation (EC) No 1272/2008
The product is classified and labelled according to the CLP regulation.
Hazard pictograms

GHS02  GHS07  GHS08

**Signal word** Danger

**Hazard-determining components of labelling:**
- Isopropanol
- ethanol
- Aliphatic ketone
- methanol

**Hazard statements**
- H225: Highly flammable liquid and vapour.
- H302+H312: Harmful if swallowed or in contact with skin.
- H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H335-H336: May cause respiratory irritation. May cause drowsiness or dizziness.

**Precautionary statements**
- P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P280: Wear protective gloves / eye protection.
- P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P403+P233: Store in a well-ventilated place. Keep container tightly closed.
- P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

**Additional information:**
- For use in industrial installations only.
- Restricted to professional users.

2.3 Other hazards

**Results of PBT and vPvB assessment**
- PBT: Not applicable.
- vPvB: Not applicable.

## SECTION 3: Composition/information on ingredients

**Description:** Mixture of substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>Chemical components</th>
<th>CAS: 67-63-0</th>
<th>EINECS: 200-661-7</th>
<th>Isopropanol</th>
<th>Flam. Liq. 2, H225</th>
<th>40-55%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CAS: 64-17-5</td>
<td>EINECS: 200-578-6</td>
<td>ethanol</td>
<td>Flam. Liq. 2, H225</td>
<td>25-40%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aliphatic ketone</td>
<td>Flam. Liq. 3, H226</td>
<td>STOT SE 3, H336</td>
</tr>
<tr>
<td></td>
<td>CAS: 67-56-1</td>
<td>EINECS: 200-659-6</td>
<td>methanol</td>
<td>Flam. Liq. 2, H225</td>
<td>Acute Tox. 2, H330</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Proprietary organic acids</td>
<td>Eye Irrit. 2, H319</td>
<td>1.0-3.0%</td>
</tr>
</tbody>
</table>

(Continued on page 3)
SECTION 4: First aid measures

4.1 Description of first aid measures
General information: Follow general first aid procedures.
After inhalation: Supply fresh air; consult doctor in case of complaints.
After skin contact: Immediately wash with water and soap and rinse thoroughly.
After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
After swallowing: Seek immediate medical advice.
4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
5.2 Special hazards arising from the substance or mixture In case of fire, the following can be released:
5.3 Advice for firefighters
Protective equipment: No special measures required.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources.
6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
6.3 Methods and material for containment and cleaning up:
Ensure adequate ventilation.
Absorb with clay, diatomaceous earth, dry sand, or other inert material. Do not use combustible materials such as sawdust.
Place in a chemical waste container. Flush residual with water.
6.4 Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Store in cool, dry place in tightly closed receptacles.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Information about fire - and explosion protection:
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
7.2 Conditions for safe storage, including any incompatibilities

Storage:
Requirements to be met by storerooms and receptacles: Store in a cool location.
Information about storage in one common storage facility: Store away from oxidising agents.
Further information about storage conditions:
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Compound</th>
<th>Limit Value 1</th>
<th>Limit Value 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>67-63-0 Isopropanol</strong></td>
<td>1225 mg/m³, 500 ppm</td>
<td>980 mg/m³, 400 ppm</td>
</tr>
<tr>
<td><strong>64-17-5 ethanol</strong></td>
<td>1920 mg/m³, 1000 ppm</td>
<td></td>
</tr>
<tr>
<td><strong>Aliphatic ketone</strong></td>
<td>966 mg/m³, 200 ppm</td>
<td>724 mg/m³, 150 ppm</td>
</tr>
<tr>
<td><strong>67-56-1 methanol</strong></td>
<td>333 mg/m³, 250 ppm</td>
<td>266 mg/m³, 200 ppm</td>
</tr>
<tr>
<td><strong>108-10-1 4-methylpentan-2-one</strong></td>
<td>416 mg/m³, 100 ppm</td>
<td>208 mg/m³, 50 ppm</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Personal protective equipment:
General protective and hygienic measures:
The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Respiratory protection:
Not necessary if room is well-ventilated.
Use suitable respiratory protective device in case of insufficient ventilation.
Protection of hands:

Protective gloves

Material of gloves
Nitrile rubber, NBR
Natural rubber, NR

Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:
Safety Glasses with Side Shields Required

Face Shield with Safety Glasses when refilling.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:
- Form: Liquid
- Colour: Colourless
- Odour: Alcohol-like

pH-value at 20 °C: 3.3

Change in condition
- Melting point/Melting range: Undetermined.
- Boiling point/Boiling range: 78 °C

Flash point: 18 °C

Ignition temperature: 399 °C

Self-igniting: Product is not selfigniting.

Danger of explosion: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

Explosion limits:
- Lower: 2.0 Vol %
- Upper: 15.0 Vol %

Vapour pressure at 20 °C: 59 hPa

Density at 20 °C: 0.81 g/cm³

Solubility in / Miscibility with water: Fully miscible.

Solvent content:
- Organic solvents: 94.6 %
- Water: 1.9 %
SECTION 10: Stability and reactivity

10.1 Reactivity  No further relevant information available.
10.2 Chemical stability
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
10.3 Possibility of hazardous reactions  No dangerous reactions known.
10.4 Conditions to avoid  No further relevant information available.
10.5 Incompatible materials: No further relevant information available.
10.6 Hazardous decomposition products: When heated to soldering temperatures, the solvents are evaporated and organic materials may be thermally degraded to liberate aliphatic aldehydes and acids.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Acute toxicity
Harmful if swallowed or in contact with skin.

LD/LC50 values relevant for classification:

<table>
<thead>
<tr>
<th>67-63-0 Isopropanol</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>LD50</td>
</tr>
<tr>
<td>Dermal</td>
<td>LD50</td>
</tr>
<tr>
<td>Inhalative</td>
<td>LC50/4 h</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>64-17-5 ethanol</th>
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<tr>
<td>Oral</td>
<td>LD50</td>
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<tbody>
<tr>
<td>Oral</td>
<td>LD50</td>
</tr>
<tr>
<td>Dermal</td>
<td>LD50</td>
</tr>
</tbody>
</table>

Primary irritant effects:
- Skin corrosion/irritation  Based on available data, the classification criteria are not met.
- Serious eye damage/irritation  Based on available data, the classification criteria are not met.
- Respiratory or skin sensitisation
  May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
  Germ cell mutagenicity  Based on available data, the classification criteria are not met.
  Carcinogenicity  Based on available data, the classification criteria are not met.
  Reproductive toxicity  Based on available data, the classification criteria are not met.
- STOT-single exposure
  May cause respiratory irritation. May cause drowsiness or dizziness.
- STOT-repeated exposure  Based on available data, the classification criteria are not met.
- Aspiration hazard  Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1 Toxicity
Aquatic toxicity: No further relevant information available.
SAFETY DATA SHEET (SDS)
according to 1907/2006/EC, Article 31

Printing Date: 02.09.2016  Version number 14  Revision: 02.09.2016

Trade name: 952-D6 Soldering Flux

Additional ecological information:
General notes:
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

(Continued from page 6)

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation: Must not be disposed together with household garbage. Do not allow product to reach sewage system.

European waste catalogue
14 06 03 Other solvents and solvent mixtures

Uncleaned packaging:
Recommendation: Disposal must be made according to official regulations.
Recommended cleansing agents: Water, if necessary together with cleansing agents.

(Continued on page 8)

SECTION 14: Transport information

14.1 UN-Number
IMDG, IATA

14.2 UN proper shipping name
ADR
IMDG
IATA

14.3 Transport hazard class(es)
ADR, IMDG, IATA

Class 3 Flammable liquids.
Label

14.4 Packing group
ADR, IMDG, IATA

14.5 Environmental hazards:
Not applicable.
14.6 Special precautions for user
Not applicable.

Danger code (Kemler):
EMS Number:
Stowage Category
14.7 Transport in bulk according to Annex II of Marpol
and the IBC Code

Transport/Additional information:
ADR
Limited quantities (LQ)

(Continued on page 8)
SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Labelling according to Regulation (EC) No 1272/2008
The product is classified and labelled according to the CLP regulation.

Hazard pictograms

![Pictograms](image)

Signal word Danger

Hazard-determining components of labelling:
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Hazard statements
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- P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

Directive 2012/18/EU
Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t

REGULATION (EC) No 1907/2006 ANNEX XVII
Conditions of restriction: 3, 30

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.
### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Department issuing SDS:** Product Compliance / EHS Department  
**Contact:**  
EHS_Kester@kester.com  
Branch Manager (Malaysia Only) Telephone No : 04-6414633  
**Abbreviations and acronyms:**  
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Flam. Liq. 2: Flammable liquids – Category 2  
Flam. Liq. 3: Flammable liquids – Category 3  
Acute Tox. 4: Acute toxicity – Category 4  
Acute Tox. 2: Acute toxicity – Category 2  
Acute Tox. 3: Acute toxicity – Category 3  
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2  
Resp. Sens. 1: Respiratory sensitisation – Category 1  
Carc. 2: Carcinogenicity – Category 2  
STOT SE 1: Specific target organ toxicity (single exposure) – Category 1  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
* Data compared to the previous version altered.