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

- **Trade name:** 985M Soldering Flux
- **Relevant identified uses of the substance or mixture and uses advised against:** Soldering Flux
- **Professional use of solder**

1.3 Details of the supplier of the safety data sheet
This Safety Data Sheet has been updated in accordance with the Globally Harmonized System (GHS).

**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

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

1.4 Emergency telephone number:
TRANSPORT EMERGENCY Phone: CHEMTREC (800) 424-9300 (Outside US & Canada): 00+1 +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.

- **GHS07**
- **Eye Irrit. 2 H319** Causes serious eye irritation.
- **STOT SE 3 H336** 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**

**Signal word** Danger
**Hazard statements**
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

**Precautionary statements**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P280 Wear protective gloves / eye protection.

(Continued on page 2)
40.2.4 P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
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:
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*

3.2 Chemical characterisation: Mixtures

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>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropanol</td>
<td>&gt;60%</td>
<td>Flam. Liq. 2, H225</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Eye Irrit. 2, H319; STOT SE 3, H336</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS: 64742-47-8</th>
<th>EINECS: 265-149-8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated light</td>
<td>5-10%</td>
</tr>
<tr>
<td>Aliphatic carboxylic acid</td>
<td>1.0-3.0%</td>
</tr>
<tr>
<td>Skin Irrit. 2, H315</td>
<td></td>
</tr>
<tr>
<td>Halogenated organic diol</td>
<td>1.0-3.0%</td>
</tr>
</tbody>
</table>

Additional information:
This solder product does not contain any Substance of Very High Concern (SVHC) on the European Chemicals Agency (ECHA) candidate list.

*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.
For safety reasons unsuitable extinguishing agents: Water with full jet

5.2 Special hazards arising from the substance or mixture
In case of fire, the following can be released:
Carbon monoxide (CO)
SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation

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.
Do not flush with water or aqueous cleansing agents

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
Prevent formation of aerosols.
Ensure good ventilation/exhaustion at the workplace.
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: Not required.
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>Ingredient</th>
<th>PEL Short-term value</th>
<th>Long-term value</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-63-0 Isopropanol</td>
<td>1225 mg/m³, 500 ppm</td>
<td>980 mg/m³, 400 ppm</td>
</tr>
<tr>
<td></td>
<td>1250 mg/m³, 500 ppm</td>
<td>980 mg/m³, 400 ppm</td>
</tr>
<tr>
<td></td>
<td>1250 mg/m³, 500 ppm</td>
<td>999 mg/m³, 400 ppm</td>
</tr>
</tbody>
</table>

(Continued on page 4)
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:

When ventilation is not sufficient to remove fumes from the breathing zone, a safety approved respirator or self-contained breathing apparatus should be worn.

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.

Body protection:

Apron

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:
Form: Liquid
Colour: Light yellow
Odour: Alcohol-like

pH-value: 3

Change in condition
Melting point/Melting range: Undetermined.
Boiling point/Boiling range: 82 °C

Flash point: 18 °C

Ignition temperature: 225 °C

Self-igniting: Product is not selfigniting.

Danger of explosion: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
SAFETY DATA SHEET (SDS) according to 1907/2006/EC, Article 31

Trade name: 985M Soldering Flux

(Continued from page 4)

Explosion limits:
- Lower: 2.0 Vol %
- Upper: 12.0 Vol %

Vapour pressure at 20 °C: 43 hPa

Density at 20 °C: 0.81 g/cm³

Solubility in / Miscibility with water: Partly soluble.

Solvent content:
- Organic solvents: VOC Content 667 g/L

SECTION 10: Stability and reactivity

10.1 Reactivity
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: Strong acids, strong oxidizers.
- 10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
- Acute toxicity:
  - LD/LC50 values relevant for classification:
  - 67-63-0 Isopropanol
    - Oral LD50 5045 mg/kg (rat)
    - Dermal LD50 12800 mg/kg (rabbit)
    - Inhalative LC50/4 h 30 mg/l (rat)
  - Primary irritant effect:
    - on the skin: Irritant to skin and mucous membranes.
    - on the eye: Irritating effect.
- Additional toxicological information:
  - The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version: Irritant

SECTION 12: Ecological information

12.1 Toxicity
- Aquatic toxicity: No further relevant information available.
- 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 on page 6)
SAFETY DATA SHEET (SDS)
according to 1907/2006/EC, Article 31

Tradename: 985M Soldering Flux

(Continued from page 5)

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. Disposal must be made according to official regulations.

Uncleaned packaging:
Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN-Number
IMDG, IATA  UN1219

14.2 UN proper shipping name
ADR, IMDG, IATA  UN1219, ISOPROPANOL (ISOPROPYL ALCOHOL) mixture, 3, II

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

Class  3 Flammable liquids.
Label  3

14.4 Packing group
ADR, IMDG, IATA  II

14.5 Environmental hazards:
Marine pollutant:  No

14.6 Special precautions for user
EMS Number:  F-E,S-D

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not applicable.

Transport/Additional information:

ADR
Limited quantities (LQ)  1L
Exempted quantities (EQ)  Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

IMDG
Limited quantities (LQ)  1L
Exempted quantities (EQ)  Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

UN "Model Regulation":
UN1219, ISOPROPANOL (ISOPROPYL ALCOHOL) mixture, 3, II

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
All ingredients are listed on the following Government Inventories:
China:  Inventory of Existing Chemical Substances in China (IECSC)
Korea:  Korea Existing Chemicals List (ECL)
Europe:  European Inventory of Existing Commercial Chemical Substances (EINECS)

(Continued on page 7)
SAFETY DATA SHEET (SDS)
according to 1907/2006/EC, Article 31

(Continued from page 6)

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

Hazard pictograms

GHS02  GHS07

Signal word  Danger

Hazard statements
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Precautionary statements
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P280 Wear protective gloves / eye protection.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
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.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

The information contained herein is based on data considered accurate and is offered solely for information, consideration and investigation. Kester extends no warranties, makes no representations and assumes no responsibility as to the accuracy, completeness or suitability of this data for any purchaser’s use. The data on this Safety Data Sheet (SDS) relates only to this product and does not relate to use with any other material or in any process. All chemical products should be used only by, or under the direction of, technically qualified personnel who are aware of the hazards involved and the necessity for reasonable care in handling. Hazard communication regulations require that employees must be trained on how to use a Safety Data Sheet (SDS) as a source for hazard information.

Department issuing MSDS: Product Compliance / EHS Department
Contact: EHS_Kester@kester.com

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
Flam. Liq. 2: Flammable liquids, Hazard Category 2
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
Asp. Tox. 1: Aspiration hazard, Hazard Category 1

* Data compared to the previous version altered.