

**SAFETY DATA SHEET (SDS)**

According to 1907/2006/EC, Article 31

Printing Date 12/21/2016

Version number 13

Reviewed on 12/21/2016

**1 PRODUCT AND COMPANY IDENTIFICATION****Trade name:** 985M Soldering Flux**Article number:** C3-00-985M**Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.**1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Kester Inc.

800 West Thorndale Avenue

Itasca, IL 60143 USA

Tel (630) 616-4000

Tel International 00 1 630 616-4000

ITW Specialty Materials (Suzhou) Co., Ltd.

Heng Qiao Road

Wujiang Economic Development Zone

Suzhou, Jiangsu 215200 China

Tel +86 512 82060808

Kester GmbH

Ganghofer Strasse 45

D-82216 Gernlinden Germany

Tel +49 (0) 8142 4785 0

**Information department:** 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 &amp; Canada) Telephone Number : (703) 527-3887

**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 vapor.



GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

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 labeled according to the CLP regulation.

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Trade name: **985M Soldering Flux**

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**Hazard pictograms**



GHS02 GHS07

**Signal word** Danger

**Hazard statements**

- H225 Highly flammable liquid and vapor.
- H319 Causes serious eye irritation.
- H317 May cause an allergic skin reaction.
- 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): 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.

**Hazard description:**

**WHMIS Symbols**



**Classification system:**

**NFPA ratings (scale 0 - 4)**



Health = 1  
Fire = 3  
Reactivity = 0

**HMIS-ratings (scale 0 - 4)**



Health = 1  
Fire = 3  
Reactivity = 0

**2.3 Other hazards**

**Results of PBT and vPvB assessment**

PBT: Not applicable.  
vPvB: Not applicable.

**3 COMPOSITION OF MIXTURE**

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

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CAS No.	Description	% Range
CAS: 67-63-0 EINECS: 200-661-7	Isopropanol ⚠ Flam. Liq. 2, H225 ⚠ Eye Irrit. 2A, H319; STOT SE 3, H336	85-100%
	Aliphatic hydrocarbon solvent ⚠ Asp. Tox. 1, H304 ⚠ Skin Irrit. 2, H315 Aquatic Chronic 4, H413	5-<10%
	Proprietary Organic Acids ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Eye Irrit. 2A, H319	1.0-3.0%
	Halogenated organic diol ⚠ Acute Tox. 4, H302; Eye Irrit. 2A, H319; Skin Sens. 1B, H317	1.0-3.0%

**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.

**5 FIREFIGHTING MEASURES**
**5.1 Extinguishing media**
**Suitable extinguishing agents:**

 CO<sub>2</sub>, extinguishing 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**

 Nitrogen oxides (NO<sub>x</sub>)

In case of fire, the following can be released:

**5.3 Advice for firefighters**
**Protective equipment:** No special measures required.

**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.

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**Protective Action Criteria for Chemicals**

**PAC-1:**

CAS: 67-63-0	Isopropanol	400 ppm
	Proprietary Organic Acids	6.8 mg/m3

**PAC-2:**

CAS: 67-63-0	Isopropanol	2000* ppm
	Proprietary Organic Acids	75 mg/m3

**PAC-3:**

CAS: 67-63-0	Isopropanol	12000** ppm
	Proprietary Organic Acids	450 mg/m3

**7 HANDLING AND STORAGE**

**7.1 Precautions for safe handling** Prevent formation of aerosols.  
**Information about protection against explosions and fires:**  
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 receptacle tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.  
**7.3 Specific end use(s)** No further relevant information available.

**8 EXPOSURE CONTROLS / PERSONAL PROTECTION**

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

**8.1 Control parameters**  
**Components with limit values that require monitoring at the workplace:**  
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.  
At this time, the other constituents have no known exposure limits.

**CAS: 67-63-0 Isopropanol**

PEL	Long-term value: 980 mg/m <sup>3</sup> , 400 ppm
REL	Short-term value: 1225 mg/m <sup>3</sup> , 500 ppm
	Long-term value: 980 mg/m <sup>3</sup> , 400 ppm
TLV	Short-term value: 984 mg/m <sup>3</sup> , 400 ppm
	Long-term value: 492 mg/m <sup>3</sup> , 200 ppm
	BEI

**Additional information:**  
PEL = Permissible Exposure Limit (OSHA)  
TLV= Threshold Limit Value (ACGIH)  
OSHA= Occupational Safety and Health Administration  
ACGIH= American Conference of Governmental Industrial Hygienists

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**8.2 Exposure controls**

**Personal protective equipment:**

**General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

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.

**Breathing equipment:**

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

**9 PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties**

**General Information**

**Appearance:**

<b>Form:</b>	Liquid
<b>Color:</b>	Light yellow
<b>Odor:</b>	Alcohol-like

**pH-value:** 3

**Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	82 °C (180 °F)

**Flash point:** < 23 °C (< 73 °F)

**Ignition temperature:** 338 °C (640 °F)

**Auto igniting:** Product is not selfigniting.

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

**Explosion limits:**

<b>Lower:</b>	2.0 Vol %
<b>Upper:</b>	12.0 Vol %

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**Vapor pressure at 20 °C (68 °F):** 43 hPa (32 mm Hg)  
**Density at 20 °C (68 °F):** 0.81 g/cm<sup>3</sup> (6.759 lbs/gal)  
**Solubility in / Miscibility with Water:** Partly soluble.  
**Solvent content:**  
**Organic solvents:** 86.0 %  
**Water:** 3.0 %  
**Solids content:** 3.0 %

**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:** No dangerous decomposition products known.

**11 TOXICOLOGICAL INFORMATION**

**11.1 Information on toxicological effects**  
**Acute toxicity:** Based on available data, the classification criteria are not met.

**LD/LC50 values that are relevant for classification:**

**CAS: 67-63-0 Isopropanol**

Oral	LD50	5045 mg/kg (rat)
Dermal	LD50	12800 mg/kg (rabbit)
Inhalative	LC50/4 h	30 mg/l (rat)

**Aliphatic hydrocarbon solvent**

Oral	LD50	> 5000 mg/kg (rat)
Dermal	LD50	> 2000 mg/kg (rabbit)
Inhalative	LC50/4 h	> 5.2 mg/l (rat)

**Primary irritant effect:**  
**on the skin:** Based on available data, the classification criteria are not met.  
**on the eye:**

Causes serious eye irritation.

**Sensitization:**

May cause an allergic skin reaction.

**Additional toxicological information:**

**Carcinogenic categories**

**IARC (International Agency for Research on Cancer)**

CAS: 67-63-0   Isopropanol	3
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**NTP (National Toxicology Program)**

None of the ingredients is listed.

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**OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

**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.

**13 DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods**

**Recommendation:**

Disposal must be made according to official regulations.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

**Uncleaned packagings:**

**Recommendation:** Disposal must be made according to official regulations.

**14 TRANSPORT INFORMATION**

**14.1 UN-Number**

DOT, ADR, IMDG, IATA

UN1219

**14.2 UN proper shipping name**

DOT

Isopropanol mixture

ADR

1219 Isopropanol mixture

IMDG, IATA

ISOPROPANOL (ISOPROPYL ALCOHOL) mixture

**14.3 Transport hazard class(es)**

DOT



Class

3 Flammable liquids

Label

3

ADR, IMDG, IATA



Class

3 Flammable liquids

Label

3

**14.4 Packing group**

IMDG, IATA

II

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**Marine pollutant:** No  
**14.6 Special precautions for user** Not applicable.  
**EMS Number:** F-E,S-D  
**Stowage Category** B  
**14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

**Transport/Additional information:**

**ADR**  
**Excepted 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  
**Excepted quantities (EQ)** Maximum net quantity per inner packaging: 30 ml  
 Maximum net quantity per outer packaging: 500 ml

**UN "Model Regulation":** UN 1219 ISOPROPANOL MIXTURE, 3, II

**15 REGULATORY INFORMATION**

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

- China: Inventory of Existing Chemical Substances in China (IECSC)
- Korea: Korea Existing Chemicals List (ECL)
- Europe: European Inventory of Existing Commercial Chemical Substances (EINECS)
- Japan: Inventory of Existing and New Chemical Substances (ENCS)
- Philippines: Philippine Inventory of Chemicals and Chemical Substances (PICCS)
- USA: TSCA (Toxic Substances Control Act) TSCA Inventory of Chemical Substances

**USA** The following information relates to product regulation specific to the USA.

**SARA (Superfund Amendments and Reauthorization Act)**

**Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

**Section 313 (Specific toxic chemical listings):**

CAS: 67-63-0 | Isopropanol

**Chemicals known to cause cancer:**

None of the ingredients is listed.

**Chemicals known to cause reproductive toxicity:**

None of the ingredients is listed.

**Carcinogenic categories**

**EPA (Environmental Protection Agency)**

None of the ingredients is listed.

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

**CANADA:**

Workplace Hazardous Materials Identification (WHMIS):

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation (CPR) and the Safety Data Sheet (SDS) contains all of the information required by the CPR.

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**Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labeled according to the CLP regulation.

**Hazard pictograms**



GHS02 GHS07

**Signal word Danger**

**Hazard statements**

- H225 Highly flammable liquid and vapor.
- H319 Causes serious eye irritation.
- H317 May cause an allergic skin reaction.
- 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): 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.

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

**16 OTHER INFORMATION**

**Department issuing Safety Data Sheet (SDS):** Product Compliance / EHS Department

**Contact:** EHS\_Kester@kester.com

**Date of preparation / last revision** 12/21/2016 / 12

**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
- DOT: US Department of Transportation
- 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)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- WHMIS: Workplace Hazardous Materials Information System (Canada)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- NIOSH: National Institute for Occupational Safety
- OSHA: Occupational Safety & Health
- TLV: Threshold Limit Value
- PEL: Permissible Exposure Limit
- REL: Recommended Exposure Limit
- Flam. Liq. 2: Flammable liquids – Category 2
- Acute Tox. 4: Acute toxicity – Category 4
- Skin Irrit. 2: Skin corrosion/irritation – Category 2
- Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
- Skin Sens. 1: Skin sensitisation – Category 1
- Skin Sens. 1B: Skin sensitisation – Category 1B
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- Asp. Tox. 1: Aspiration hazard – Category 1

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Aquatic Chronic 4: Hazardous to the aquatic environment - long-term aquatic hazard – Category 4  
**\* Data compared to the previous version altered.**

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