Safety Data Sheet
acc. to OSHA HCS 29CFR1910.1200

Printing Date 06/06/2017 Version number 4 Reviewed on 06/06/2017

1 Identification

Trade name: 979 Soldering Flux
Relevant identified uses of the substance or mixture and uses advised against
No further relevant information available.

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
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

*
2 Hazard(s) identification

Classification of the substance or mixture

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

Label elements
GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
Hazard pictograms

GHS07

Signal word Warning

Hazard-determining components of labeling:
Aromatic monocarboxylic acid
Halogenated organic diol
Azole Isomers
Hazard statements
H317 May cause an allergic skin reaction.
Precautionary statements
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 IF ON SKIN: Wash with plenty of water.

(Contd. on page 2)

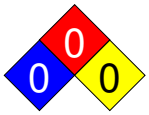
Safety Data Sheet
acc. to OSHA HCS 29CFR1910.1200

Printing Date 06/06/2017 Version number 4 Reviewed on 06/06/2017

Trade name: 979 Soldering Flux

(Contd. of page 1)

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
Classification system:
NFPA ratings (scale 0 - 4)



Health = 0
Fire = 0
Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 0
Fire = 0
Reactivity = 0

Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

*
3 Composition/information on ingredients

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

CAS No.	Description	% Range
Trade Secret	Proprietary Organic Acids Acute Tox. 4, H302; Acute Tox. 4, H312; Eye Irrit. 2A, H319	3.0-5.0%
CAS: 143-24-8	bis(2-(2-methoxyethoxy)ethyl) ether Skin Irrit. 2, H315; Eye Irrit. 2A, H319	1.0-3.0%
Trade Secret	Aromatic monocarboxylic acid Acute Tox. 4, H302; Eye Irrit. 2A, H319; Skin Sens. 1B, H317	0.1-<1%
Trade Secret	Halogenated organic diol Acute Tox. 4, H302; Eye Irrit. 2A, H319; Skin Sens. 1B, H317	0.1-<1%
Trade Secret	Azole Isomers Acute Tox. 4, H302; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	0.1-<1%

4 First-aid measures

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.
After swallowing: Seek immediate medical advice.
Information for doctor:
Most important symptoms and effects, both acute and delayed No further relevant information available.
Indication of any immediate medical attention and special treatment needed No further relevant information available.

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS 29CFR1910.1200

Printing Date 06/06/2017 Version number 4 Reviewed on 06/06/2017

Trade name: 979 Soldering Flux

(Contd. of page 2)

*
5 Fire-fighting measures

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

*
6 Accidental release measures

Personal precautions, protective equipment and emergency procedures Ensure adequate ventilation
Environmental precautions: Do not allow to enter sewers/ surface or ground water.
Methods and material for containment and cleaning up: Dispose of the collected material according to regulations.
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.
Protective Action Criteria for Chemicals

PAC-1:	
Proprietary Organic Acids	6.8 mg/m3
PAC-2:	
Proprietary Organic Acids	75 mg/m3
PAC-3:	
Proprietary Organic Acids	450 mg/m3

7 Handling and storage

Handling:
Precautions for safe handling No special measures required.
Information about protection against explosions and fires: No special measures required.

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: None.
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.

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.

Proprietary Organic Acids	
REL	Long-term value: 1 mg/m³

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS 29CFR1910.1200

Printing Date 06/06/2017 Version number 4 Reviewed on 06/06/2017

Trade name: 979 Soldering Flux

(Contd. of page 3)

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

Exposure controls
Personal protective equipment:
General protective and hygienic measures:
The usual precautionary measures for handling chemicals should be followed.
Wash hands before breaks and at the end of work.
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

Information on basic physical and chemical properties
General Information
Appearance:
Form: Liquid
Color: Colorless
Odor: Mild

pH-value: Not determined.

Change in condition
Melting point/Melting range: Undetermined.
Boiling point/Boiling range: 100 °C (212 °F)

Flash point: Not applicable.

Auto igniting: Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.

Vapor pressure at 20 °C (68 °F): 23 hPa (17 mm Hg)

Density at 20 °C (68 °F): 1.02 g/cm³ (8.512 lbs/gal)

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS 29CFR1910.1200

Printing Date 06/06/2017 Version number 4 Reviewed on 06/06/2017

Trade name: 979 Soldering Flux

(Contd. of page 4)

Solubility in / Miscibility with
Water: Fully miscible.

Solvent content:
Organic solvents: 2.5 %
Water: 92.2 %

Solids content: 5.2 %

10 Stability and reactivity

Reactivity No further relevant information available.
Chemical stability
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Possibility of hazardous reactions No dangerous reactions known.
Conditions to avoid No further relevant information available.
Incompatible materials: No further relevant information available.
Hazardous decomposition products: No dangerous decomposition products known.

*
11 Toxicological information

Information on toxicological effects
Acute toxicity:
Primary irritant effect:
on the skin: No irritant effect.
on the eye: Irritating effect.
Sensitization: Sensitization possible through inhalation.
Additional toxicological information:

Carcinogenic categories

IARC (International Agency for Research on Cancer)
None of the ingredients is listed.

NTP (National Toxicology Program)
None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients is listed.

12 Ecological information

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

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS 29CFR1910.1200

Printing Date 06/06/2017 Version number 4 Reviewed on 06/06/2017

Trade name: 979 Soldering Flux

(Contd. of page 5)

13 Disposal considerations

Waste treatment methods
Recommendation:
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.
Recommended cleansing agent: Water, if necessary with cleansing agents.

*

14 Transport information

UN-Number	
DOT, ADR, ADN, IMDG, IATA	Not applicable
UN proper shipping name	
DOT, ADR, ADN, IMDG, IATA	Not applicable
Transport hazard class(es)	
DOT, ADR, ADN, IMDG, IATA	
Class	Not applicable
Packing group	
DOT, IMDG, IATA	Not applicable
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	Not applicable

*

15 Regulatory information

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)
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):
None of the ingredients is listed.

California Proposition 65

Chemicals known to cause cancer:
None of the ingredients is listed.

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS 29CFR1910.1200

Printing Date 06/06/2017 Version number 4 Reviewed on 06/06/2017

Trade name: 979 Soldering Flux

(Contd. of page 6)

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:
Not classified.
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.
GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
Hazard pictograms

GHS07

Signal word Warning

Hazard-determining components of labeling:
Aromatic monocarboxylic acid
Halogenated organic diol
Azole Isomers
Hazard statements
H317 May cause an allergic skin reaction.
Precautionary statements
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 IF ON SKIN: Wash with plenty of water.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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 responsibilty as to the accuracy, completeness or suitability of this data for any purchaser's use. The data on this Material Safety Data Sheet 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 Material Safety Data Sheet as a source for hazard information.

Department issuing Safety Data Sheet (SDS): 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
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances

(Contd. on page 8)

Safety Data Sheet
acc. to OSHA HCS 29CFR1910.1200

Printing Date 06/06/2017 Version number 4 Reviewed on 06/06/2017

Trade name: 979 Soldering Flux

(Contd. of page 7)

CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
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
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
*** Data compared to the previous version altered.**