

Material Safety Data Sheet

acc. to ISO/DIS 11014

1 Identification of substance

Product details

Trade name: 977 VOC FREE, LOW RESIDUE SOLDERING FLUX

Application of the substance / the preparation: Soldering flux

Manufacturer/Supplier:

Kester
800 West Throntdale Ave.
Itasca, IL 60143
Tel (630) 616-4000
Fax (630) 616-4044

Information department: MSDS Coordinator (630) 616-6844

Emergency information:

CHEMTREC 24-Hour Emergency Response Telephone Number : (800) 424-9300

CHEMTREC 24-Hour Emergency Response (Outside US & Canada) Telephone Number : (703) 527-3887

2 Hazards identification

Hazard description: Not applicable.

WHMIS Hazard Symbols



Information pertaining to particular dangers for man and environment: Not applicable.

NFPA ratings (scale 0 - 4)



Health = 1
Fire = 1
Reactivity = 0

HMIS-ratings (scale 0 - 4)




Health = 1
Fire = 1
Reactivity = 0

GHS label elements Void

3 Composition / Information on ingredients

Chemical characterization

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

CAS No.	Description	% Range
7732-18-5	water, distilled, conductivity or of similar purity	50-100%
110-15-6	succinic acid	Warning:  3.3/2A ≤ 2.5%
24800-44-0	Tripropylene Glycol	≤ 2.5%

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77-99-6 propylidynetrimechanol

≤ 2.5%

4 First aid measures

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.

5 Fire fighting measures

Suitable extinguishing agents:
 CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Special hazards caused by the material, its products of combustion or resulting gases:
 In case of fire, the following can be released:
 Carbon monoxide (CO)
 Carbon dioxide (CO₂)
 Aliphatic aldehydes
Protective equipment: Wear self-contained respiratory protective device.

6 Accidental release measures

Person-related safety precautions: Ensure adequate ventilation
Measures for environmental protection: Do not allow to enter sewers/ surface or ground water.
Measures for cleaning/collecting:
 Absorb with clay, dry sand, or other inert material. Do not use combustible materials such as sawdust. Place in a chemical waste container.

7 Handling and storage

Handling:
Information for safe handling: Ensure good ventilation/exhaustion at the workplace.
Information about protection against explosions and fires: Keep respiratory protective device available.
Storage:
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: Store in cool, dry conditions in well sealed receptacles.

8 Exposure controls and personal protection

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

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Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information:

*PEL = Permissible Exposure Limit (OSHA)
 REL= Recommended Exposure Limit (NIOSH)
 TLV= Threshold Limit Value (ACGIH)
 OSHA= Occupational Safety and Health Administration
 ACGIH= American Conference of Governmental Industrial Hygienists
 NIOSH= National Institute for Occupational Safety and Health*

Personal protective equipment:

General protective and hygienic measures:

*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:

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

9 Physical and chemical properties

General Information

Form: *Liquid*
Color: *Colorless*
Odor: *Odorless*

Change in condition

Melting point/Melting range: *0°C (32°F)*
Boiling point/Boiling range: *100°C (212°F)*

Flash point: *Not applicable.*

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

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Vapor pressure at 20°C (68°F): 19 hPa (14 mm Hg)

Density at 25°C (77°F): 1.012 g/cm³

Solubility in / Miscibility with
Water: Soluble.

10 Stability and reactivity

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

Materials to be avoided: Strong acids, strong oxidizers.

Dangerous reactions No dangerous reactions known.

Dangerous products of decomposition: Carbon monoxide and carbon dioxide

11 Toxicological information

Acute toxicity:

Primary irritant effect:

on the skin: Possible local irritation by contact with flux or fumes.

on the eye: Smoke during soldering can cause eye irritation.

through inhalation: May cause respiratory irritation.

through ingestion: May cause gastrointestinal irritation.

Sensitization: No sensitizing effects known.

12 Ecological information

General notes: Do not allow product to reach ground water, water course or sewage system.

13 Disposal considerations

Product:

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.

14 Transport information

DOT regulations:

Hazard class: -
Not regulated.

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Land transport ADR/RID (cross-border):

ADR/RID class: -
Not regulated.

Maritime transport IMDG:

IMDG Class: -
Not regulated.

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: -
Not regulated.

15 Regulations

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.

TSCA (Toxic Substances Control Act): Kester certifies that all components listed below for the subject finished product are on the TSCA Inventory of Chemical Substances and are not subject to any chemical specific regulation under TSCA Section 12(b) export notification requirements delineated at 40 CFR part 707, subpart D.

7732-18-5 *water, distilled, conductivity or of similar purity*

110-15-6 *succinic acid*

24800-44-0 *Tripropylene Glycol*

77-99-6 *propylidynetrimethanol*

California Proposition 65

Chemicals known to cause cancer:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity:

None of the ingredients is listed.

Carcinogenicity categories

EPA (Environmental Protection Agency)

None of the ingredients is listed.

IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

NTP (National Toxicology Program)

None of the ingredients is listed.

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

None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

CANADA: The following information relates to product regulation specific to 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 MSDS contains all of the information required by the CPR.

Components on Ingredient List for WHMIS:

succinic acid

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 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.

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)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)