

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/24/2003

Reviewed on 06/24/2003

1 Identification of substance**Product details****Trade name:** 1571*Application of the substance / the preparation: Soldering flux***Manufacturer/Supplier:**Kester
515 E. Touhy Ave.
Des Plaines, IL 60018Tel.(847) 297-1600
Fax.(847) 390-9338**Information department:**

MSDS Coordinator

Tel. (847) 699-5755

Emergency information:

CHEMTREC 24-Hour Emergency Telephone Number:

(800)424-9300

CHEMTREC 24-Hour Emergency Telephone Number (Outside of the U.S. and Canada):

(703)527-3887

2 Composition/Data on components**Chemical characterization***Description: Mixture of the substances listed below with nonhazardous additions.***Dangerous components:**

78-92-2	butanol	25-50%
8050-09-7	Rosin	25-50%
64-17-5	ethanol	10-25%
67-63-0	propan-2-ol	≤ 2.5%
67-56-1	methanol	≤ 2.5%

3 Hazards identification**WHMIS Hazard Symbols****Information pertaining to particular dangers for man and environment:***The product has to be labelled due to the calculation procedure of international guidelines.**Has a narcotizing effect.**Highly flammable.**Irritating to eyes and respiratory system.**May cause sensitisation by skin contact.**Vapours may cause drowsiness and dizziness.***Classification system:****NFPA ratings (scale 0 - 4)**

Health = 1

Fire = 3

Reactivity = 0

(Contd. on page 2)

USA

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/24/2003

Reviewed on 06/24/2003

Trade name: 1571

(Contd. of page 1)

HMIS-ratings (scale 0 - 4)

HEALTH	1	Health = 1
FIRE	3	Fire = 3
REACTIVITY	0	Reactivity = 0

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. If symptoms persist, consult a doctor.

After swallowing: Induce vomiting, if person is conscious. Seek medical help.**5 Fire fighting measures****Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.**For safety reasons unsuitable extinguishing agents:** Water with full jet**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

Keep away from ignition sources

Measures for environmental protection: Do not allow product to reach sewage system or any water course.**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.

Open and handle receptacle with care.

Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Storage:**Requirements to be met by storerooms and receptacles:** Store in a cool location.

(Contd. on page 3)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/24/2003

Reviewed on 06/24/2003

Trade name: 1571

(Contd. of page 2)

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.**Components with limit values that require monitoring at the workplace:****78-92-2 butanol**

PEL	450 mg/m ³ , 150 ppm
REL	Short-term value: 455 mg/m ³ , 150 ppm Long-term value: 305 mg/m ³ , 100 ppm
TLV	300 mg/m ³ , 100 ppm

8050-09-7 Rosin

PEL	(Colophony)
TLV	SEN; (L)

64-17-5 ethanol

PEL	1900 mg/m ³ , 1000 ppm
REL	1900 mg/m ³ , 1000 ppm
TLV	1880 mg/m ³ , 1000 ppm

67-63-0 propan-2-ol

PEL	980 mg/m ³ , 400 ppm
REL	Short-term value: 1225 mg/m ³ , 500 ppm Long-term value: 980 mg/m ³ , 400 ppm
TLV	Short-term value: (1230) mg/m ³ , (500) ppm Long-term value: (983) mg/m ³ , (400) ppm NIC-200; 491; 400; 984; A 4

67-56-1 methanol

PEL	260 mg/m ³ , 200 ppm
REL	Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm Skin
TLV	Short-term value: 328 mg/m ³ , 250 ppm Long-term value: 262 mg/m ³ , 200 ppm Skin; BEI

Additional information:

The lists that were valid during the creation were used as basis.

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.

(Contd. on page 4)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/24/2003

Reviewed on 06/24/2003

Trade name: 1571

(Contd. of page 3)

*Avoid contact with the eyes and skin.***Breathing equipment:***In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.**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**The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.**Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.**Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation**Material of gloves:**The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.**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:***Tightly sealed goggles***9 Physical and chemical properties****General Information**

Form: *Liquid*
Color: *Amber colored*
Odor: *Alcohol-like*

Change in condition**Melting point/Melting range:** *Undetermined.***Boiling point/Boiling range:** *76°C (169°F)***Flash point:** *18°C (64°F)***Ignition temperature:** *390.0°C (734°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:****Lower:** *1.7 Vol %*

(Contd. on page 5)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/24/2003

Reviewed on 06/24/2003

Trade name: 1571

(Contd. of page 4)

Upper: 15.0 Vol %**Vapor pressure at 20°C (68°F):** 59.0 hPa (44 mm Hg)**Density at 20°C (68°F):** 0.892 g/cm³**Solubility in / Miscibility with Water:** Partly miscible.**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:***When heated to soldering temperatures, the solvents are evaporated and rosin may be thermally degraded to liberate aliphatic aldehydes and acids.***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:**Fumes during use may irritate mucous membranes and respiratory system. High concentrations can cause headache, dizziness, narcosis, and nausea.**through ingestion: May cause gastrointestinal irritation.***Sensitization:** Sensitization possible through skin contact.**Additional toxicological information:***The product shows the following dangers according to internally approved calculation methods for preparations: Irritant***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.

USA

(Contd. on page 6)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/24/2003

Reviewed on 06/24/2003

Trade name: 1571

(Contd. of page 5)

14 Transport information**DOT regulations:**

Hazard class: 3
Identification number: UN1987
Packing group: II
Proper shipping name (technical name): ALCOHOLS, N.O.S. (BUTANOLS, ETHANOL)
Label: 3

Land transport ADR/RID (cross-border):

ADR/RID class: 3 Flammable liquids
Danger code (Kemler): 33
UN-Number: 1987
Packaging group: II
Description of goods: 1987 ALCOHOLS, N.O.S., special provision 640D (BUTANOLS, ETHANOL (ETHYL ALCOHOL))

Maritime transport IMDG:

IMDG Class: 3
UN Number: 1987
Label: 3
Packaging group: II
EMS Number: F-E,S-E
Marine pollutant: No
Propper shipping name: ALCOHOLS, N.O.S. (BUTANOLS, ETHANOL (ETHYL ALCOHOL))

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: 3
UN/ID Number: 1987
Label: 3
Packaging group: II
Propper shipping name: ALCOHOLS, N.O.S. (BUTANOLS, ETHANOL)

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):

78-92-2 butanol

67-63-0 propan-2-ol

TSCA (Toxic Substances Control Act):

All ingredients are listed.

California Proposition 65

Chemicals known to cause cancer:

None of the ingredients is listed.

(Contd. on page 7)

USA

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/24/2003

Reviewed on 06/24/2003

Trade name: 1571

(Contd. of page 6)

*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)*67-63-0 | *propan-2-ol* | 3*NTP (National Toxicology Program)**None of the ingredients is listed.**TLV (Threshold Limit Value established by ACGIH)*64-17-5 | *ethanol* | 5*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.**WHMIS Classification:**B2**D2A**D2B***Components on Ingredient List for WHMIS:***Rosin**ethanol**propan-2-ol**butanol***EUROPEAN UNION***The following information relates to product regulation specific to the directives of the European Union.***Risk phrases:***Highly flammable.**Irritating to eyes and respiratory system.**May cause sensitisation by skin contact.**Vapours may cause drowsiness and dizziness.***Safety phrases:***Keep out of the reach of children.**Avoid contact with skin and eyes.**Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.**Wear suitable gloves.*

(Contd. on page 8)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/24/2003

Reviewed on 06/24/2003

Trade name: 1571*If swallowed, seek medical advice immediately and show this container or label.*

(Contd. of page 7)

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.

Department issuing MSDS: *Product Safety***Contact:** *Heather Holich, MSDS Coordinator**Tel. (847)699-5755*

USA