

1 Identification of substance

Product details

Trade name: 1865HPS

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:



Irritant
Highly flammable

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.

Vapours may cause drowsiness and dizziness.

NFPA ratings (scale 0 - 4)



Health = 1
Fire = 3
Reactivity = 0

HMIS-ratings (scale 0 - 4)



Health = 1
Fire = 3
Reactivity = 0

GHS label elements



Danger

2.6/2 - Highly flammable liquid and vapour.

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**Warning**

- 3.3/2A - Causes serious eye irritation.
 3.4/1 - May cause an allergic skin reaction.
 3.8/3 - May cause drowsiness or dizziness.

Prevention:

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 Use explosion-proof electrical/ventilating/lighting/equipment.

Response:

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage:

Store locked up.








Disposal:

Dispose of contents/container in accordance with local/regional/national/international regulations.

3 Composition / Information on ingredients

Chemical characterization

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

CAS No.	Description		% Range
67-63-0	propan-2-ol	Danger:  2.6/2 Warning:  3.3/2A, 3.8/3	50-100%
110-15-6	succinic acid	Warning:  3.3/2A	≤ 2.5%
872-50-4	N-methyl-2-pyrrolidone	Warning:  3.2/2, 3.3/2A; 2.6/4	≤ 2.5%
124-04-9	adipic acid	Warning:  3.3/2A	≤ 2.5%
57-09-0	cetrimonium bromide	Warning:  4.1.A/1;  3.1.O/4, 3.2/2, 3.3/2A	≤ 2.5%

4 First aid measures

General information: Take affected persons out into the fresh air.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact: Generally the product does not irritate the skin.

After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing: Call a doctor immediately.

5 Fire fighting measures

Suitable extinguishing agents:

CO₂, 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

Special hazards caused by the material, its products of combustion or resulting gases:

In case of fire, the following can be released:

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Aliphatic aldehydes
Carbon monoxide (CO)
Carbon dioxide (CO₂)

Protective equipment: *Wear self-contained respiratory protective device.*

6 Accidental release measures

Person-related safety precautions:

Ensure adequate ventilation
Wear protective equipment. Keep unprotected persons away.
Keep away from ignition sources

Measures for environmental protection: *Do not allow to enter sewers/ surface or ground water.*

Measures for cleaning/collecting: *Ensure adequate ventilation.*

7 Handling and storage

Handling:

Information for safe handling:

Store in cool, dry place in tightly closed receptacles.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.

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.*
Information about storage in one common storage facility: *Store away from oxidizing agents.*
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:

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: 984 mg/m ³ , 400 ppm Long-term value: 492 mg/m ³ , 200 ppm

124-04-9 adipic acid

TLV	5 mg/m ³
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Additional information:

PEL = Permissible Exposure Limit (OSHA)
REL = Recommended Exposure Limit (NIOSH)
TLV = Threshold Limit Value (ACGIH)
OSHA = Occupational Safety and Health Administration

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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: Light yellow
Odor: Alcohol-like

Change in condition

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: Undetermined.

Flash point: 18°C (64°F)

Ignition temperature: 425.0°C (797°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: 2.0 Vol %
Upper: 12.0 Vol %

Vapor pressure at 20°C (68°F): 43.0 hPa (32 mm Hg)

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Density at 20°C (68°F): 0.803 g/cm³

Solubility in / Miscibility with Water: Not miscible or difficult to mix.

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:

LD/LC50 values that are relevant for classification:

67-63-0 propan-2-ol

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

57-09-0 cetrimonium bromide

Oral	LD50	410 mg/kg (rat)
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110-15-6 succinic acid

Oral	LD50	2260 mg/kg (rat)
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872-50-4 N-methyl-2-pyrrolidone

Oral	LD50	3914 mg/kg (rat)
Dermal	LD50	8000 mg/kg (rabbit)

Primary irritant effect:

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

on the eye: Irritating effect.

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: No sensitizing effects known.

Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Irritant

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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. Disposal must be made according to official regulations.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

14 Transport information

DOT regulations:



Hazard class: 3
 Identification number: UN1219
 Packing group: II
 Proper shipping name (technical name): ISOPROPANOL (ISOPROPYL ALCOHOL), mixture
 Label: 3

Land transport ADR/RID (cross-border):



ADR/RID class: 3 Flammable liquids
 Danger code (Kemler): 33
 UN-Number: 1219
 Packaging group: II
 Description of goods: 1219 ISOPROPANOL (ISOPROPYL ALCOHOL), mixture

Maritime transport IMDG:



IMDG Class: 3
 UN Number: 1219
 Label: 3

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Packaging group: II
EMS Number: F-E,S-E
Marine pollutant: No
Propper shipping name: ISOPROPANOL (ISOPROPYL ALCOHOL), mixture

Air transport ICAO-TI and IATA-DGR:



ICAO/IATA Class: 3
UN/ID Number: 1219
Label: 3
Packaging group: II
Propper shipping name: ISOPROPANOL (ISOPROPYL ALCOHOL), mixture
UN "Model Regulation": UN1219, ISOPROPANOL (ISOPROPYL ALCOHOL), mixture, 3, II

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):

872-50-4 | N-methyl-2-pyrrolidone

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.

67-63-0	propan-2-ol
110-15-6	succinic acid
872-50-4	N-methyl-2-pyrrolidone
124-04-9	adipic acid
57-09-0	cetrimonium bromide

California Proposition 65

Chemicals known to cause cancer:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity:

WARNING: This product contains a chemical(s) known to the State of California to cause birth defects and/or other reproductive harm.

N-methyl-2-pyrrolidone

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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

103-23-1 bis(2-ethylhexyl) adipate

3

NTP (National Toxicology Program)

None of the ingredients is listed.

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.

Code letter and hazard designation of product:

Irritant
Highly flammable

EUROPEAN UNION

The following information relates to product regulation specific to the directives of the European Union.

Risk phrases:

Highly flammable.

Irritating to eyes.

Vapours may cause drowsiness and dizziness.

Safety phrases:

Keep out of the reach of children.

Keep container tightly closed and in a well-ventilated place.

Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.

If swallowed, seek medical advice immediately and show this container or label.

16 Other information

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USA

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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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent