**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

1.1 Trade name: 2125 Soldering Flux  
Application of the substance / the preparation: Soldering Flux  
1.2 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  
Tel 00+1 + 630 616 4000  
ITW Specialty Materials (Suzhou) Co., Ltd.  
Hengqiao Road, Wujian Economic Development Zone  
Suzhou, Jiangsu Province, China 215200  
Tel +86 512 82060807  
Kester GmbH  
Ganghofer Strasse 45  
D-82216 Gerlininden Germany  
Tel +49 (0) 8142 4785 0  

Further information obtainable from: 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 & Canada)  
Telephone Number : (703) 527-3887

**SECTION 2: Hazards identification**

2.1 Classification of the substance or mixture  
Classification according to Regulation (EC) No 1272/2008  

flammable liquid  
GHS02 flame  

Flam. Liq. 2  H225  Highly flammable liquid and vapour.  

health hazard  
GHS08 health hazard  

Resp. Sens. 1  H334  May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
Carc. 2  H351  Suspected of causing cancer.  

corrosive  
GHS05 corrosion  

Eye Dam. 1  H318  Causes serious eye damage.  

skin irritation  
GHS07  

Skin Irrit. 2  H315  Causes skin irritation.
2.2 Label elements
Labelling according to Regulation (EC) No 1272/2008
The product is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS02 GHS05 GHS08

Signal word Danger

Hazard-determining components of labelling:
Glycolic Acid
(2-methoxymethylethoxy)propanol
diethanolamine

Hazard statements
H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H351 Suspected of causing cancer.

Precautionary statements
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position 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.
P308+P313 IF EXPOSED OR CONCERNED: Get medical advice/attention.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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

SECTION 3: Composition/information on ingredients

Description: Mixture of substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>Chemical components</th>
<th>CAS: 64-17-5</th>
<th>EINECS: 200-578-6</th>
<th>Ethanol</th>
<th>Flam. Liq. 2, H225</th>
<th>40-55%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade Secret</td>
<td>Organic Acid</td>
<td></td>
<td></td>
<td>Eye Irrit. 2, H319</td>
<td>10-25%</td>
</tr>
<tr>
<td>CAS: 34590-94-8</td>
<td>EINECS: 252-104-2</td>
<td>(2-methoxymethylethoxy)propanol</td>
<td>Resp. Sens. 1B, H334</td>
<td>5-10%</td>
<td></td>
</tr>
<tr>
<td>CAS: 67-63-0</td>
<td>EINECS: 200-661-7</td>
<td>Isopropanol</td>
<td>Flam. Liq. 2, H225</td>
<td>Eye Irrit. 2, H319; STOT SE 3, H336</td>
<td>3-5%</td>
</tr>
</tbody>
</table>
Trade name: 2125 Soldering Flux

(Cordiued from page 2)

<table>
<thead>
<tr>
<th>CAS: 79-14-1</th>
<th>Glycolic Acid</th>
<th>Skin Corr. 1B, H314</th>
</tr>
</thead>
<tbody>
<tr>
<td>EINECS: 201-180-5</td>
<td></td>
<td>Acute Tox. 4, H302</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS: 111-42-2</td>
<td>diethanolamine</td>
<td>Carc. 2, H351; STOT RE 2, H373</td>
</tr>
<tr>
<td>EINECS: 203-868-0</td>
<td></td>
<td>Eye Dam. 1, H318</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute Tox. 4, H302; Skin Irrit. 2, H315</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS: 67-56-1</td>
<td>methanol</td>
<td>Flam. Liq. 2, H225</td>
</tr>
<tr>
<td>EINECS: 200-659-6</td>
<td></td>
<td>Acute Tox. 2, H330</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STOT SE 1, H370</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS: 108-10-1</td>
<td>4-methylpentan-2-one</td>
<td>Flam. Liq. 2, H225</td>
</tr>
<tr>
<td>EINECS: 203-550-1</td>
<td></td>
<td>Acute Tox. 3, H331</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Carc. 2, H351</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Eye Irrit. 2, H319; STOT SE 3, H335</td>
</tr>
</tbody>
</table>

SVHC
This product does not contain any Substance of Very High Concern (SVHC) on the European Chemicals Agency (ECHA) candidate list.

SECTION 4: First aid measures

4.1 Description of first aid measures
General information:
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
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.

SECTION 5: Firefighting measures

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

SECTION 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:
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
6.4 Reference to other sections
See Section 7 for information on safe handling.

(Continued on page 4)
SECTION 7: Handling and storage

7.1 Precautions for safe handling
Prevent formation of aerosols.
Information about fire - and explosion protection:
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 container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

7.3 Specific end use(s)
No further relevant information available.

SECTION 8: Exposure controls/personal protection

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

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>CAS</th>
<th>Ingredient</th>
<th>Long-term value</th>
<th>Short-term value</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5</td>
<td>ethanol</td>
<td>1920 mg/m³, 1000 ppm</td>
<td>1225 mg/m³, 500 ppm</td>
</tr>
<tr>
<td>34590-94-8</td>
<td>(2-methoxymethylethoxy)propanol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>67-63-0</td>
<td>isopropanol</td>
<td>308 mg/m³, 50 ppm</td>
<td>333 mg/m³, 250 ppm</td>
</tr>
<tr>
<td>67-56-1</td>
<td>methanol</td>
<td>980 mg/m³, 400 ppm</td>
<td>999 mg/m³, 400 ppm</td>
</tr>
<tr>
<td>108-10-1</td>
<td>4-methylpentan-2-one</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8.2 Exposure controls
Personal protective equipment:
General protective and hygienic measures:
The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.

(Continued on page 5)
Trade name: 2125 Soldering Flux

Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

**Respiratory protection:**
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 with Side Shields Required

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**SECTION 9: Physical and chemical properties**

9.1 Information on basic physical and chemical properties

**General Information**

**Appearance:**
- Form: Liquid
- Colour: Light orange colour
- Odour: Alcohol-like

**pH-value:**
- Not determined.

**Change in condition**
- Melting point/freezing point: Undetermined.
- Initial boiling point and boiling range: 77°C

**Flash point:**
- 18°C

**Ignition temperature:**
- 270°C

**Auto-ignition temperature:**
- Product is not selfigniting.

**Explosive properties:**
- Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

**Explosion limits:**
- Lower: 3.5Vol %
- Upper: 15Vol %

**Vapour pressure at 20°C:**
- 59hPa

**Density at 20°C:**
- 0.96g/cm³

**Solubility in / Miscibility with water:**
- Fully miscible.

(Continued from page 4)

(Continued on page 6)
SECTION 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: Strong acids, strong oxidizers.
10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

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

LD/LC50 values relevant for classification:

<table>
<thead>
<tr>
<th>CAS: 64-17-5 ethanol</th>
<th>Oral LD50 7,080 mg/kg (rat)</th>
<th>Inhalative LC50/4 h 20,000 mg/l (rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proprietary Polyol</td>
<td>Oral LD50 &gt;5,000 mg/kg (rat)</td>
<td>Dermal LD50 &gt;2,000 mg/kg (rabbit)</td>
</tr>
<tr>
<td>Organic Acid</td>
<td>Oral LD50 5,040 mg/kg (mouse)</td>
<td></td>
</tr>
<tr>
<td>CAS: 34590-94-8 (2-methoxymethylethoxy)propanol</td>
<td>Oral LD50 5,135 mg/kg (rat)</td>
<td>Dermal LD50 &gt;19,000 mg/kg (rabbit)</td>
</tr>
<tr>
<td>CAS: 111-42-2 diethanolamine</td>
<td>Oral LD50 1,600 mg/kg (rat)</td>
<td>Dermal LD50 12,200 mg/kg (rabbit)</td>
</tr>
<tr>
<td>CAS: 67-56-1 methanol</td>
<td>Oral LD50 5,828 mg/kg (rat)</td>
<td>Dermal LD50 15,800 mg/kg (rabbit)</td>
</tr>
<tr>
<td></td>
<td>Inhalative LC50/4 h 0.5 mg/l (ATE)</td>
<td></td>
</tr>
</tbody>
</table>

Primary irritant effect:
Skin corrosion/irritation
Causes skin irritation.
Serious eye damage/irritation
Causes serious eye damage.
Respiratory or skin sensitisation
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
Germ cell mutagenicity Based on available data, the classification criteria are not met.
**SAFETY DATA SHEET (SDS)**
according to 1907/2006/EC, Article 31

**Trade name:** 2125 Soldering Flux

(Continued from page 6)

**Carcinogenicity**
Suspected of causing cancer.

**Reproductive toxicity** Based on available data, the classification criteria are not met.

**STOT-single exposure** Based on available data, the classification criteria are not met.

**STOT-repeated exposure** Based on available data, the classification criteria are not met.

**Aspiration hazard** Based on available data, the classification criteria are not met.

**SECTION 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.

**SECTION 13: Disposal considerations**

13.1 Waste treatment methods

**Recommendation**
Disposal must be made according to official regulations.
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

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

**Recommended cleansing agents:** Water, if necessary together with cleansing agents.

**SECTION 14: Transport information**

14.1 UN-Number
IMDG, IATA

14.2 UN proper shipping name
**ADR**
1987 ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), ISOPROPAANOL (ISOPROPYL ALCOHOL))

**IMDG**
ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), ISOPROPAANOL (ISOPROPYL ALCOHOL))

**IATA**
ALCOHOLS, N.O.S. (ETHANOL, ISOPROPAANOL (ISOPROPYL ALCOHOL))

14.3 Transport hazard class(es)
**ADR, IMDG, IATA**

**Class**
3 Flammable liquids.

**Label**
3

14.4 Packing group
**ADR, IMDG, IATA**

II

(Continued on page 8)
14.5 Environmental hazards:
Marine pollutant: No
14.6 Special precautions for user
Stowage Category B
14.7 Transport in bulk according to Annex II of Marpol
and the IBC Code Not applicable.

Transport/Additional information:

ADR
Limited quantities (LQ) 1L
Excepted quantities (EQ) Code: E2
Maximum net quantity per inner packaging: 30 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 1987 ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), ISOPROPANOL (ISOPROPYL ALCOHOL)), 3, II

SECTION 15: Regulatory information

15.1 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

Labelling according to Regulation (EC) No 1272/2008
The product is classified and labelled according to the CLP regulation.

Hazard pictograms

![Pictograms](image)

Signal word Danger

Hazard-determining components of labelling:
- Glycolic Acid
- (2-methoxymethylethoxy)propanol
- diethanolamine

Hazard statements
- H225 Highly flammable liquid and vapour.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H351 Suspected of causing cancer.

Precautionary statements
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 Wash thoroughly after handling.
### SECTION 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 Safety Data Sheet (SDS) 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 Safety Data Sheet (SDS) as a source for hazard information.

**Department issuing 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  
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)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
SVHC: Substances of Very High Concern  
vPvB: very Persistent and very Bioaccumulative  
Flam. Liq. 2: Flammable liquids – Category 2  
Acute Tox. 4: Acute toxicity – Category 4  
Acute Tox. 2: Acute toxicity – Category 2  
Acute Tox. 3: Acute toxicity – Category 3  
Skin Corr. 1B: Skin corrosion/irritation – Category 1B  
Skin Irrit. 2: Skin corrosion/irritation – Category 2  
Eye Dam. 1: Serious eye damage/eye irritation – Category 1  
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2  
Resp. Sens. 1: Respiratory sensitisation – Category 1  
Resp. Sens. 1B: Respiratory sensitisation – Category 1B  
Carc. 2: Carcinogenicity – Category 2  
Carc. 2: Carcinogenicity – Category 2  
STOT SE 1: Specific target organ toxicity (single exposure) – Category 1  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

* Data compared to the previous version altered.