

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 12.10.2020

Version number 21

Revision: 12.10.2020

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

Trade name: RF771 Rework Flux

Relevant identified uses of the substance or mixture and uses advised against Professional use

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Kester LLC
 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

Further information obtainable from: EHS_Kester@kester.com

1.4 Emergency telephone number:

CHEMTREC 24-Hour Emergency Response Telephone Number: International +1 703 741-5970

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS08 health hazard

Repr. 2 H361-H362 Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.
 Eye Irrit. 2 H319 Causes serious eye irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

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Hazard pictograms


GHS07 GHS08

Signal word Warning

Hazard-determining components of labelling:

Organic solvent

1,2,5,6,9,10- hexabromocyclododecane

Hazard statements

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H361-H362 Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P260 Do not breathe dusts or mists.

P263 Avoid contact during pregnancy and while nursing.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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
3.2 Chemical characterisation: Mixtures
Description: Mixture

Dangerous components:

	Organic solvent ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319	10–20%
	Organic solvent ⚠ Repr. 2, H361; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332	3–5%
CAS: 111-42-2 EINECS: 203-868-0 Index number: 603-071-00-1	2,2'-iminodiethanol ⚠ STOT RE 2, H373; ⚠ Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315	1–<3%
	Additive ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	0.25–<2.5%

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Additional information: For the wording of the listed hazard phrases refer to section 16.**SECTION 4: First aid measures****4.1 Description of first aid measures****General information:** Immediately remove any clothing soiled by the product.**After inhalation:** In case of unconsciousness place patient stably in side position for transportation.**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: If symptoms persist consult doctor.**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**

During heating or in case of fire poisonous gases are produced.

5.3 Advice for firefighters**Protective equipment:** Mouth respiratory protective device.**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Mount respiratory protective device.

6.2 Environmental precautions:

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

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.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

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Open and handle receptacle with care.

Information about fire - and explosion protection: Keep respiratory protective device available.**7.2 Conditions for safe storage, including any incompatibilities****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:** Keep container tightly sealed.**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:**

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

Additional information: The lists valid during the making were used as basis.**8.2 Exposure controls** Use only with adequate ventilation**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

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

Respiratory protection:

Use suitable respiratory protective device in case of insufficient ventilation.

Use suitable respiratory protective device when high concentrations are present.

Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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.

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Eye protection:


Safety glasses

Body protection: Protective work clothing

SECTION 9: Physical and chemical properties
9.1 Information on basic physical and chemical properties
General Information
Appearance:

Form:	Viscous
Colour:	Amber coloured
Odour:	Mild
Odour threshold:	Not determined.

pH-value: Not applicable.

Change in condition

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	240 °C

Flash point: 91 °C

Flammability (solid, gas): Not determined.

Ignition temperature: 200 °C

Decomposition temperature: Not determined.

Auto-ignition temperature: Product is not selfigniting.

Explosive properties: Product does not present an explosion hazard.

Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

Vapour pressure at 20 °C: 1 hPa

Density:	Not determined.
Relative density	Not determined.
Vapour density	Not applicable.
Evaporation rate	Not applicable.

Solubility in / Miscibility with water: Insoluble.

Partition coefficient: n-octanol/water: Not determined.

Viscosity:
Dynamic: Not applicable.

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Kinematic:	Not applicable.
Solvent content: VOC (EC)	11.00 %
Solids content: 9.2 Other information	34.6–37 % No further relevant information available.

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:** No further relevant information available.**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:****ATE (Acute Toxicity Estimates)**

Oral	LD50	64,000 mg/kg (rat)
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Organic solvent

Oral	LD50	4,300 mg/kg (rat)
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Organic solvent

Oral	LD50	5,140 mg/kg (rat)
Inhalative	LC50/4 h	11 mg/l (ATE)

111-42-2 2,2'-iminodiethanol

Oral	LD50	1,600 mg/kg (rat)
Dermal	LD50	12,200 mg/kg (rabbit)

Additive

Oral	LD50	890 mg/kg (rat)
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Primary irritant effect:**Skin corrosion/irritation**

Causes skin irritation.

Serious eye damage/irritation

Causes serious eye irritation.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)****Germ cell mutagenicity** Based on available data, the classification criteria are not met.

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Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity

Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children.

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.

12.2 Persistence and degradability No further relevant information available.

12.3 Bioaccumulative potential No further relevant information available.

12.4 Mobility in soil No further relevant information available.

Ecotoxicological effects:

Remark: Harmful to fish

Additional ecological information:

General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Harmful to aquatic organisms

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

European waste catalogue

HP10	Toxic for reproduction
HP14	Ecotoxic

Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN-Number

ADR, ADN, IMDG, IATA

Not regulated

14.2 UN proper shipping name

ADR, ADN, IMDG, IATA

Not regulated

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14.3 Transport hazard class(es)

ADR, ADN, IMDG, IATA

Class

Not regulated

14.4 Packing group

ADR, IMDG, IATA

Not regulated

14.5 Environmental hazards:

Not applicable.

14.6 Special precautions for user

Not applicable.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

UN "Model Regulation":

Not regulated

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Directive 2012/18/EU

Named dangerous substances - ANNEX I None of the ingredients is listed.

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

National regulations:

The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.**SECTION 16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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 the purchaser's use. The data on this Safety Data Sheet 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 employees must be trained on how to use the SDS as a source for hazard information.

Relevant phrases

H302 Harmful if swallowed.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H361 Suspected of damaging fertility or the unborn child.

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EU

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H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

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)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity - oral – Category 4

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

Repr. 2: Reproductive toxicity – Category 2

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

*** Data compared to the previous version altered.**