

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

Printing date 03.12.2019

Version number 20

Revision: 03.12.2019

SECTION 1: Identification of the substance/mixture and of the company/undertaking**Trade name: TSF-6592 LV Tacky Soldering 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**

GHS07

Acute Tox. 4	H332 Harmful if inhaled.
Skin Irrit. 2	H315 Causes skin irritation.
Eye Irrit. 2	H319 Causes serious eye irritation.
Aquatic Chronic 4	H413 May cause long lasting harmful effects to aquatic life.

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

GHS07

(Contd. on page 2)

-EU-

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

Printing date 03.12.2019

Version number 20

Revision: 03.12.2019

Trade name: TSF-6592 LV Tacky Soldering Flux

(Contd. of page 1)

Signal word Warning

Hazard-determining components of labelling:

Organic solvent

Hazard statements

H332 Harmful if inhaled.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H413 May cause long lasting harmful effects to aquatic life.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves / eye protection / face protection.

P304+P340 IF INHALED: Remove person to fresh air and keep 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.

P312 Call a POISON CENTER/doctor if you feel unwell.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:

EUH208 Contains Additive. May produce an allergic reaction.

Information concerning particular hazards for human and environment:

Contains Rosin. Prolonged exposure to smoke, or fumes generated by heating this product may cause respiratory irritation.

Refer to Section 8 - Exposure Controls / Personal Protection for further information.

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:

Proprietary rosin	Aquatic Chronic 4, H413	30–50%
Organic solvent	⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319	20–30%
Organic solvent	⚠ Acute Tox. 3, H331	20–30%
Organic Acid	⚠ Eye Irrit. 2, H319	1–<10%
Additive	⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	0.1–<1%

Additional information: For the wording of the listed hazard phrases refer to section 16.

 EU
 (Contd. on page 3)

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

Printing date 03.12.2019

Version number 20

Revision: 03.12.2019

Trade name: TSF-6592 LV Tacky Soldering Flux

(Contd. of page 2)

SECTION 4: First aid measures**4.1 Description of first aid measures****General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

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:** Use fire extinguishing methods suitable to surrounding conditions.**5.2 Special hazards arising from the substance or mixture** No further relevant information available.**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** Not required.**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:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

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.

(Contd. on page 4)

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

Printing date 03.12.2019

Version number 20

Revision: 03.12.2019

Trade name: TSF-6592 LV Tacky Soldering Flux

(Contd. of page 3)

Prevent formation of aerosols.

Information about fire - and explosion protection: No special measures required.**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.

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.

(Contd. on page 5)

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

Printing date 03.12.2019

Version number 20

Revision: 03.12.2019

Trade name: TSF-6592 LV Tacky Soldering Flux

(Contd. of page 4)

Eye protection:


Safety glasses

Goggles recommended during refilling

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:	Yellow
Odour:	Mild
Odour threshold:	Not determined.

pH-value at 20 °C:	3.4
---------------------------	-----

Change in condition

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	Undetermined.

Flash point:	>100 °C
---------------------	---------

Flammability (solid, gas):	Not applicable.
-----------------------------------	-----------------

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:	Not determined.
-------------------------	-----------------

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

Solubility in / Miscibility with

water:	Not miscible or difficult to mix.
---------------	-----------------------------------

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

Viscosity:

Dynamic:	Not determined.
-----------------	-----------------

(Contd. on page 6)

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

Printing date 03.12.2019

Version number 20

Revision: 03.12.2019

Trade name: TSF-6592 LV Tacky Soldering Flux

(Contd. of page 5)

Kinematic:	Not determined.
Solvent content: VOC (EC)	0.00 %
Solids content: 9.2 Other information	42.3 % 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

Harmful if inhaled.

LD/LC50 values relevant for classification:

Organic solvent

Oral	LD50	3,700 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4 h	>2.04 mg/l (rat)

Organic Acid

Oral	LD50	2,260 mg/kg (rat)
------	------	-------------------

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.

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

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.

(Contd. on page 7)

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

Printing date 03.12.2019

Version number 20

Revision: 03.12.2019

Trade name: TSF-6592 LV Tacky Soldering Flux

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

(Contd. of page 6)

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.

Additional ecological information:

General notes:

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

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

Danger to drinking water if even small quantities leak into the ground.

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

HP4	Irritant - skin irritation and eye damage
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

14.3 Transport hazard class(es)

ADR, ADN, IMDG, IATA
Class Not regulated

14.4 Packing group

ADR, IMDG, IATA Not regulated

(Contd. on page 8)

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

Printing date 03.12.2019

Version number 20

Revision: 03.12.2019

Trade name: TSF-6592 LV Tacky Soldering Flux

(Contd. of page 7)

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.

REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

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

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H331 Toxic if inhaled.

H335 May cause respiratory irritation.

H413 May cause long lasting harmful effects to aquatic life.

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)

(Contd. on page 9)

EU

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

Printing date 03.12.2019

Version number 20

Revision: 03.12.2019

Trade name: TSF-6592 LV Tacky Soldering Flux

(Contd. of page 8)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Skin Sens. 1: Skin sensitisation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Chronic 4: Hazardous to the aquatic environment - long-term aquatic hazard – Category 4

EU