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

**Trade name:** TSF-6516  
**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 Gernlinden 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: The product is not classified according to the CLP regulation.

**2.2 Label elements**  
Labelling according to Regulation (EC) No 1272/2008: Void

**Hazard pictograms:** Void

**Signal word:** Void

**Hazard statements:** Void

**Additional information:**  
Contains Halogenated organic diol. May produce an allergic reaction.

**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: 872-50-4</th>
<th>N-methyl-2-pyrrolidone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CAS: 872-50-4</td>
<td>N-methyl-2-pyrrolidone</td>
</tr>
</tbody>
</table>

1.0-3.0%

SVHC

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

(Continued on page 2)
SECTION 4: First aid measures

4.1 Description of first aid measures
General information: No special measures required.
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.
After swallowing: Induce vomiting, if person is conscious. Seek medical help.
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
In case of fire, the following can be released:
Carbon monoxide (CO)
Carbon dioxide (CO2)
Aliphatic aldehydes
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 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:
Scoop up paste and deposit in appropriate containers. Remove residual with glycol ether solvent.
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
Wash hands after handling paste and before eating or smoking. Care should be taken to remove paste from under fingernails.
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:
Store in a cool location.
Store at or near 0-10 degrees C in a dry location.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: None.
7.3 Specific end use(s)
Shelf life is 6 months from date of manufacture when stored at 0-10 °C (32-50°F).
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

<table>
<thead>
<tr>
<th>Ingredients with limit values that require monitoring at the workplace:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS: 872-50-4 N-methyl-2-pyrrolidone</td>
</tr>
<tr>
<td>WEL</td>
</tr>
<tr>
<td>Long-term value: 40 mg/m³, 10 ppm</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.

Respiratory protection:
When ventilation is not sufficient to remove fumes from the breathing zone, a safety approved respirator or self-contained breathing apparatus should be worn.
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

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information
Appearance:
Form: Viscous
Colour: Light yellow
Odour: Mild
pH-value: Not determined.

(Continued on page 4)
### 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: Carbon monoxide and carbon dioxide.
   When heated, the solvents are evaporated and rosin may be thermally degraded to liberate aliphatic aldehydes, acids, and terpenes.

### 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: 872-50-4 N-methyl-2-pyrrolidone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
</tr>
<tr>
<td>Dermal</td>
</tr>
</tbody>
</table>

**Primary irritant effect:**
   - **Skin corrosion/irritation** Possible local irritation by contact with flux or fumes.
   - **Serious eye damage/irritation** Smoke during soldering can cause 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.

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(Continued from page 3)

**Trade name: TSF-6516**

- **Change in condition**
  - **Melting point/freezing point:** Undetermined.
  - **Flash point:** > 60 °C
  - **Ignition temperature:** 186 °C
  - **Auto-ignition temperature:** Product is not selfigniting.
  - **Explosive properties:** Product does not present an explosion hazard.
  - **Density:** Not determined.
  - **Solubility in / Miscibility with water:** Not miscible or difficult to mix.
  - **Solvent content:**
    - **Organic solvents:** 32.6 %
    - **Solids content:** 57.7 %
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.

European waste catalogue
16 04 03 | other waste explosives

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

SECTION 14: Transport information

14.1 UN-Number
IMDG, IATA
Not regulated

14.2 UN proper shipping name
ADR, ADN, IMDG, IATA
Void

14.3 Transport hazard class(es)
ADR, ADN, IMDG, IATA
Void

14.4 Packing group
ADR, IMDG, IATA
Void

14.5 Environmental hazards:
Marine pollutant: No

14.6 Special precautions for user
Not applicable.

14.7 Transport in bulk according to Annex II of Marpol
Not applicable.

UN "Model Regulation":
Void

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)

(Continued on page 6)
SAFETY DATA SHEET (SDS)  
according to 1907/2006/EC, Article 31

Printing Date: 13.03.2017  
Version number 2  
Revision: 13.03.2017

Trade name: TSF-6516

(Continued from page 5)

Labelling according to Regulation (EC) No 1272/2008 Void
Hazard pictograms Void
Signal word Void
Hazard statements Void
REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 30

National regulations:

Other regulations, limitations and prohibitive regulations

Substances of very high concern (SVHC) according to REACH, Article 57
CAS: 872-50-4 [N-methyl-2-pyrrolidone]

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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

Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Repr. 1B: Reproductive toxicity – Category 1B
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

* Data compared to the previous version altered.