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

1.1. Product identifier
FDT Kleber U

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture
adhesives

Uses advised against
Only use for the intended purpose.
The product is intended for professional use.

1.3. Details of the supplier of the safety data sheet
Company name: FDT Flachdach Technologie GmbH & Co. KG
Street: Eisenbahnstraße 6-8
Place: D-68199 Mannheim
Telephone: +49 (621) 8504100
Telex: +49 (621) 8504200
e-mail: kundenservice@fdt.de
Contact person: Marco Anderer
Telephone: +49 (621) 8504563
e-mail: marco.anderer@fdt.de
Internet: http://www.fdt.de
Responsible Department: Arbeitssicherheit und Umweltschutz

1.4. Emergency telephone number:
Poison Control Center (Mayence, GER)
+49 (0)6131-19240 (24h - de, en)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Hazard categories:
Skin corrosion/irritation: Skin Irrit. 2
Serious eye damage/eye irritation: Eye Irrit. 2
Respiratory or skin sensitisation: Resp. Sens. 1
Respiratory or skin sensitisation: Skin Sens. 1
Carcinogenicity: Carc. 2
Specific target organ toxicity - single exposure: STOT SE 3
Specific target organ toxicity - repeated exposure: STOT RE 2

Hazard Statements:
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation.
Suspected of causing cancer.
May cause damage to organs through prolonged or repeated exposure.

2.2. Label elements
Hazardous components which must be listed on the label
Diphenylmethanediisocyanate - Isomers & Homologues
N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone

Signal word: Danger
Hazard statements
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P302+P352 IF ON SKIN: Wash with plenty of water.
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.
P405 Store locked up.
P501 Dispose of contents/container in accordance with national disposal regulations.

Special labelling of certain mixtures
EUH204 Contains isocyanates. May produce an allergic reaction.
Restricted to professional users.

2.3. Other hazards
The components in this mixture do not meet the criteria for classification as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures
Chemical characterization
Mixture of substances listed below with harmless additions.

Hazardous components

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>9016-87-9</td>
<td>Diphenylmethanediisocyanate - Isomers &amp; Homologues</td>
<td>10-25 %</td>
</tr>
<tr>
<td>872-50-4</td>
<td>N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone</td>
<td>&lt;2,5 %</td>
</tr>
</tbody>
</table>

Full text of H and EUH phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures
General information
In case of troubles or persistent symptoms, consult a doctor/physician. Remove persons from danger area and lie them down. Never orally infuse something to an unconscious person. No special first aid measures necessary. A vomiting, supine person must be brought into recovery position.

After inhalation
Provide fresh air. In case of respiratory tract irritation, consult a physician. In case of irregular breathing or respiratory arrest, perform artificial respiration.

After contact with skin
After contact with skin, wash immediately with plenty of water and soap. Change contaminated clothing. In case of skin irritation, consult a physician.

After contact with eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

After ingestion
Rinse mouth, spit liquid again. Do NOT induce vomiting. Let water be drunken in little sips (dilution effect). Call a physician immediately.

4. Most important symptoms and effects, both acute and delayed
May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure.

4.3. Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media
Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media
High power water jet.

5.2. Special hazards arising from the substance or mixture
In case of fire or overheating hazardous fumes may develop.

5.3. Advice for firefighters
Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information
Do not allow to enter into surface water or drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Provide adequate ventilation. Avoid contact with skin, eyes and clothes. Wear personal protection equipment.

6.2. Environmental precautions
Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.
6.4. Reference to other sections

Safe handling: see section 7
Personal precautions: refer to section 8.
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling
Provide adequate ventilation as well as local exhaustion at critical locations. Handle and open container with care.

Advice on protection against fire and explosion
No special measures are necessary.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels
Keep container tightly closed in a cool, well-ventilated place.

7.3. Specific end use(s)

adhesives

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Substance</th>
<th>ppm</th>
<th>mg/m³</th>
<th>fibres/ml</th>
<th>Category</th>
<th>Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>872-50-4</td>
<td>1-Methyl-2-pyrrolidone</td>
<td>10</td>
<td>40</td>
<td></td>
<td>TWA (8 h)</td>
<td>WEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20</td>
<td>80</td>
<td></td>
<td>STEL (15 min)</td>
<td>WEL</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Protective and hygiene measures
Change contaminated clothing. Wash hands before breaks and after work. When using do not eat or drink. Avoid skin, eye and clothing contact. After contact with skin, wash immediately with plenty of water and soap or a suitable cleaning agent.

Eye/face protection
Tightly fitting safety glasses with side shields.

Hand protection
Protect skin by using skin protective cream. Wear suitable gloves.
When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits.
The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.
Suitable material: NBR (Nitrile rubber). (penetration time (maximum wearing period): >480 minutes)

Skin protection
protection suit

Respiratory protection
Use protective filter mask in case of short-term and low exposure; in case of intense or longer exposure, use respiratory protection device operating independently from circulating air.
A2P3 Combination filter device (DIN EN 141).
### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Test method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>liquid</td>
<td>not determined</td>
</tr>
<tr>
<td>Colour</td>
<td>light yellow</td>
<td></td>
</tr>
<tr>
<td>Odour</td>
<td>characteristic</td>
<td></td>
</tr>
<tr>
<td>pH-Value</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Changes in the physical state</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting point</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>&gt;100 °C</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>330 °C</td>
<td></td>
</tr>
<tr>
<td>Flammability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gas</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Lower explosion limits</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Upper explosion limits</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gas</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Density (at 20 °C):</td>
<td>1.12 g/cm³</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>Not mixable and/or hard to mix.</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Viscosity / dynamic</td>
<td>7000 mPa·s</td>
<td></td>
</tr>
<tr>
<td>(at 20 °C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viscosity / kinematic</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Vapour density</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Solvent content</td>
<td>1.5</td>
<td></td>
</tr>
</tbody>
</table>

#### 9.2. Other information

No further information available.

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No dangerous reactivity under regular conditions.

#### 10.2. Chemical stability

The product is stable under regular conditions.

#### 10.3. Possibility of hazardous reactions

No known hazardous reactions.
10.4. Conditions to avoid
No information available.

10.5. Incompatible materials
Oxidizing agents.

10.6. Hazardous decomposition products
Upon exposure to fire, harmful gases may be emitted.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Exposure routes</th>
<th>Method</th>
<th>Dose</th>
<th>Species</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>9016-87-9 Diphenylmethanediisocyanate - Isomers &amp; Homologues</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>oral</td>
<td>LD50</td>
<td>&gt;10000 mg/kg</td>
<td>Rat</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>dermal</td>
<td>LD50</td>
<td>&gt;9400 mg/kg</td>
<td>Rabbit</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>inhalative vapour</td>
<td>ATE</td>
<td>11 mg/l</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>inhalative (4 h) aerosol</td>
<td>LC50</td>
<td>1,5 mg/l</td>
<td>Rat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>872-50-4 N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>oral</td>
<td>LD50</td>
<td>3914 mg/kg</td>
<td>Rat</td>
<td>literature value</td>
<td></td>
</tr>
<tr>
<td></td>
<td>dermal</td>
<td>LD50</td>
<td>8000 mg/kg</td>
<td>Rabbit</td>
<td>literature value</td>
<td></td>
</tr>
<tr>
<td></td>
<td>inhalative (4 h) vapour</td>
<td>LC50</td>
<td>&gt;5 mg/l</td>
<td>Rat</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Irritation and corrosivity
Causes skin irritation.
Causes serious eye irritation.

Sensitising effects
May cause an allergic skin reaction. (Diphenylmethanediisocyanate - Isomers & Homologues)
May cause allergy or asthma symptoms or breathing difficulties if inhaled. (Diphenylmethanediisocyanate - Isomers & Homologues)

STOT-single exposure
May cause respiratory irritation. (Diphenylmethanediisocyanate - Isomers & Homologues), (N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone)

Severe effects after repeated or prolonged exposure
May cause damage to organs through prolonged or repeated exposure. (Diphenylmethanediisocyanate - Isomers & Homologues)

Carcinogenic/mutagenic/toxic effects for reproduction
Suspected of causing cancer. (Diphenylmethanediisocyanate - Isomers & Homologues)

Aspiration hazard
Based on causing cancer. (Diphenylmethanediisocyanate - Isomers & Homologues)

SECTION 12: Ecological information

12.1. Toxicity
No data available.
### Aquatic toxicity

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Method</th>
<th>Dose</th>
<th>[h]</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>9016-87-9</td>
<td>Diphenylmethanediisocyanate - isomers &amp; Homologues</td>
<td>LC50</td>
<td>&gt;1000 mg/l</td>
<td>96 h</td>
<td>Brachydanio rerio (zebra-fish)</td>
</tr>
<tr>
<td>872-50-4</td>
<td>N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone</td>
<td>LC50</td>
<td>&gt;500 mg/l</td>
<td>96 h</td>
<td>Leuciscus idus (golden orfe)</td>
</tr>
</tbody>
</table>

**12.2. Persistence and degradability**

No data available.

**12.3. Bioaccumulative potential**

No data available.

**Partition coefficient n-octanol/water**

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>872-50-4</td>
<td>N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone</td>
<td>-0.54 (25° C)</td>
</tr>
</tbody>
</table>

**12.4. Mobility in soil**

No data available.

**12.5. Results of PBT and vPvB assessment**

The components in this mixture do not meet the criteria for classification as PBT or vPvB.

**12.6. Other adverse effects**

No data available.

### SECTION 13: Disposal considerations

**13.1. Waste treatment methods**

**Advice on disposal**

Disposal according to official regulations. Do not dispose with household waste. Do not allow to enter into surface water or drains.

**Contaminated packaging**

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

### SECTION 14: Transport information

**Land transport (ADR/RID)**

14.1. UN number: -

14.2. UN proper shipping name: -

14.3. Transport hazard class(es): -

14.4. Packing group: -

**Other applicable information (land transport)**

Not restricted

**Inland waterways transport (ADN)**

14.1. UN number: -

14.2. UN proper shipping name: -

14.3. Transport hazard class(es): -

14.4. Packing group: -
Other applicable information (inland waterways transport)
Not restricted

Marine transport (IMDG)
14.1. UN number: -
14.2. UN proper shipping name: -
14.3. Transport hazard class(es): -
14.4. Packing group: Nein

Other applicable information (maritime transport)
Not restricted

Air transport (ICAO)
14.1. UN number: -
14.2. UN proper shipping name: -
14.3. Transport hazard class(es): -
14.4. Packing group: -

Other applicable information (air transport)
Not restricted

14.5. Environmental hazards
ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user
No special precautions known.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
EU regulatory information
Additional information
- Regulation (EC) No. 1005/2009 on substances that lead to the depletion of the ozone layer: not applicable
- Regulation (EC) No. 648/2004 (Detergents regulation): not applicable
- REGULATION (EC) No 850/2004 on persistent organic pollutants: not applicable
- REGULATION (EC) No 689/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning the export and import of dangerous chemicals: This mix contains no chemicals that are subject to the export notification procedures (annex 1).
- This mixture contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH: N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone
- This mixture contains the following substances of very high concern (SVHC) which are subject to authorisation according to Annex XIV of REACH: none

National regulatory information
- Water contaminating class (D): 1 - slightly water contaminating

15.2. Chemical safety assessment
Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes
Revision No: 1,01
Revision date: 21.07.2015
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)
CAS: Chemical Abstracts Service
EC: Effective Concentration
EG: European Community (Europäische Gemeinschaft)
EN: European Norm
IATA: International Air Transport Association
IBC Code: International Code for the Construction and Equipment of ships carrying Dangerous Chemicals in Bulk
ICAO: International Civil Aviation Organization
IMDG: International Maritime Code for Dangerous Goods
CLP: Classification, Labeling, Packaging
IUCLID: International Uniform Chemical Information Database
LC: Lethal concentration
LD: Lethal dose
log Kow: Octanol/water partition coefficient
MARPOL: Maritime Pollution Convention = Convention for the Prevention of Maritime Pollution from Ships
OECD: Organisation for Economic Co-operation and Development
PBT: Persistent, bio-cumulative, toxic
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail
TRGS: Technische Regeln für Gefahrstoffe
VOC: Volatile Organic Compounds
vPvB: very persistent and very bio-cumulative
VwVwS: Administrative Regulation for Water Pollutants
WGK: German Water Hazard Class
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
DNEL: Derived No Effect Level
PNEC: Predicted No Effect Concentration
TLV: Threshold Limiting Value
STOT: Specific Target Organ Toxicity

Relevant H- and EUH-phrases (Number and full text)

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H360D May damage the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.
EUH204 Contains isocyanates. May produce an allergic reaction.

Further Information

The information given in this safety data sheet is to describe the product's safety regulations. It is not for guaranteeing certain characteristics and is based on today's knowledge. The safety data sheet was generated upon information of pre-suppliers by:
(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)