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

1.1 Product identifier
- Trade name: K-400
- Article number: F01800A000

1.2 Relevant identified uses of the substance or mixture and uses advised against
- Product category PC1 Adhesives, sealants
- Application of the substance / the mixture Adhesives

1.3 Details of the supplier of the safety data sheet
- Manufacturer/Supplier: L’Isolante K-Flex SpA
- Via Leonardo da Vinci, 36 - 20877 RONCELLO (MB) ITALY
- tel. +39 039 6824200; fax +39 039 6824350
- e-mail Kflex-Reach@isolante.com

1.4 Emergency telephone number: R&D Department
- +39 039 6824.1 (9:00 - 17:00)
- ITALIA Centro Antiveneni Ospedale Niguarda "Ca' Granda" MILANO tel. 02/66101029; Fondazione Maugeri - Clinica del lavoro e della Riabilitazione PAVIA tel. 0382/24444; Centro Documentazione Tossicologica - Università degli Studi PADOVA tel. 049/8275078; Centro Antiveneni Istituto Scientifico "G. Gaslini" GENOVA tel. 010/5636245; Centro Antiveneni Azienda Ospedaliera "Careggi" FIRENZE tel. 055/427728; Centro Antiveneni "Policlinico Gemelli" ROMA tel. 06/3054343; Centro Antiveneni Università degli Studi di Roma "La Sapienza" ROMA tel. 06/49970698; Centro Antiveneni Azienda Ospedaliera "A. Cardarelli" NAPOLI tel. 081/7472870; Centro antiveneni Azienda Ospedaliera Universitaria FOGGIA tel. 0881/731111
- AUSTRIA Vergiftungsinformationszentrale +43 1 406 43 43
- BELGIUM Centre Antipoisons-Antigifcentrum +32 3024 5245
- BULGARIA National Toxicology Centre at National Clinical Toxicology Centre +359 2 9154 233
- CROATIA Poisen Control Centre Zagreb +385 1 2348342
- CECH REPUBLIC Toxicological Information Centre +42024919 293
- DENMARK Poison Information Centre +45 82 12 12 12
- ESTONIA Estonian Poison Information centre +372 626 93 90
- FINLAND Finnish Poison Information Centre +358 9 471977
- FRANCE Centre Antipoison et de Toxicovigilance de Angers +33 2 41 35 33 30
- HUNGARY Health Toxicology Information Service +36 80 20 11 99
- IRELAND Poison Information Centre of Ireland +353 1 809 2166
- LATVIA Valsts Toksikologijas centres + 371 67042473
- LITHUANIA Lithuania Poison Control and Information Bureau +370 5 236 20 52
- PORTUGAL CIAV Centro de Informacao Antivenenos +351 808 250 143
- SLOVAKIA National Toxicological Information Center +421 2 54 774 166
- SPAIN Instituto Nacional de Toxicologia +34 156 20420

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008
  - GHS02 flame
    - Flam. Liq. 2 H225 Highly flammable liquid and vapour.
  - GHS09 environment
    - Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.
42.1.1 GHS07
Eye Irrit. 2 H319 Causes serious eye irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.

2.2 Label elements
2.2.1 Labelling according to Regulation (EC) No 1272/2008
The product is classified and labelled according to the CLP regulation.
2.2.2 Hazard pictograms
GHS02 GHS07 GHS09

- Signal word Danger
- Hazard-determining components of labelling:
  Solvent naphtha (petroleum), hydrotreated light naphthenic
  Acetone
- Hazard statements
  H225 Highly flammable liquid and vapour.
  H319 Causes serious eye irritation.
  H336 May cause drowsiness or dizziness.
  H411 Toxic to aquatic life with long lasting effects.
- Precautionary statements
  P280 Wear protective gloves/protective clothing/eye protection/face protection.
  P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
  P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  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.
- Additional information:
  Contains Rosin. May produce an allergic reaction.

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

SECTION 3: Composition/information on ingredients
3.2 Chemical characterisation: Mixtures
3.2.1 Description: Mixture of substances listed below with nonhazardous additions.
3.2.2 Dangerous components:
| CAS: 92062-15-2 | Solvent naphtha (petroleum), hydrotreated light naphthenic |
| 926-605-8 | Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; STOT SE 3, H336 | 30-50% |
### SECTION 4: First aid measures

**4.1 Description of first aid measures**

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **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, sand, extinguishing powder. Do not use water.

**5.2 Special hazards arising from the substance or mixture**

No further relevant information available.

### SECTION 6: Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

**6.2 Environmental precautions:**

Prevent seepage into sewage system, workpits and cellars. Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter severs/ 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). Ensure adequate ventilation.
SECTION 7: Handling and storage

7.1 Precautions for safe handling  
Ensure good ventilation/exhaustion at the workplace.

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

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>WEL Short-term</th>
<th>Long-term</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-64-1 Acetone</td>
<td>3620 mg/m³, 1500 ppm</td>
<td>1210 mg/m³, 500 ppm</td>
</tr>
<tr>
<td>141-78-6 Ethyl acetate</td>
<td>400 ppm</td>
<td>200 ppm</td>
</tr>
</tbody>
</table>

DINELs

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Dermal Long term-Systemic effect</th>
<th>Inhalative Long term-Local effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-64-1 Acetone</td>
<td>186 mg/kg (workers)</td>
<td>2420 mg/m³ (workers)</td>
</tr>
<tr>
<td>141-78-6 Ethyl acetate</td>
<td>63 mg/kg (workers)</td>
<td>1468 mg/m³ (workers)</td>
</tr>
</tbody>
</table>

PNECs

<table>
<thead>
<tr>
<th>Chemical</th>
<th>fresh water</th>
<th>marine water</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-64-1 Acetone</td>
<td>10.6 mg/l</td>
<td>1.06 mg/l</td>
</tr>
</tbody>
</table>
8.2 Exposure controls
- Personal protective equipment:
  - General protective and hygienic measures:
    Keep away from foodstuffs, beverages and feed.
    Immediately remove all soiled and contaminated clothing
    Wash hands before breaks and at the end of work.
    Do not inhale gases / fumes / aerosols.
    Avoid contact with the eyes.
    Avoid contact with the eyes and skin.
  - Respiratory protection:
    In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
  - Protection of hands:
    Solvent resistant gloves

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
Eye protection:

Tightly sealed goggles
### SECTION 9: Physical and chemical properties

**9.1 Information on basic physical and chemical properties**

- **General Information**
  - Appearance: Fluid
  - Colour: According to product specification
  - Odour: Characteristic
  - Odour threshold: Not determined.
- **pH-value:** Not determined.
- **Change in condition**
  - Melting point/Melting range: Undetermined.
  - Boiling point/Boiling range: 55 °C
- **Flash point:** -20 °C
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:** > 200 °C
- **Decomposition temperature:** Not determined.
- **Self-igniting:** Product is not selfigniting.
- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
- **Explosion limits:**
  - Lower: 1.2 Vol %
  - Upper: 13.0 Vol %
- **Vapour pressure at 20 °C:** 233 hPa
- **Density at 20 °C:** 0.85 g/cm³
- **Relative density:** Not determined.
- **Vapour density:** Not determined.
- **Evaporation rate:** Not determined.
- **Solubility in / Miscibility with water:** Soluble.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - Dynamic at 20 °C: 680 mPas
  - Kinematic: Not determined.
- **Solvent content:**
  - Organic solvents: 77.3 %
  - Water: 0.0 %
  - VOC (EU): 659.3 g/l
- **Solids content:** 22.7 %

**9.2 Other information**

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.
- **Possibility of hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
**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>Compound</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-64-1 Acetone</td>
<td></td>
<td></td>
<td>5800 mg/kg (rat)</td>
<td>20000 mg/kg (rabbit)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>141-78-6 Ethyl acetate</td>
<td></td>
<td></td>
<td>4935 mg/kg (rabbit)</td>
<td></td>
<td>1600 mg/l (rat)</td>
<td></td>
</tr>
<tr>
<td>128-37-0 2,6-di-tert-butyl-p-cresol</td>
<td></td>
<td></td>
<td>890 mg/kg (rat)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1330-20-7 Xylene (mix)</td>
<td></td>
<td></td>
<td>8700 mg/kg (rat)</td>
<td></td>
<td>2000 mg/kg (rabbit)</td>
<td></td>
</tr>
</tbody>
</table>

- **Primary irritant effect:**
  
  - **Skin corrosion/irritation**: Based on available data, the classification criteria are not met.
  - **Serious eye damage/irritation**: Causes serious eye irritation.
  - **Respiratory or skin sensitisation**: Based on available data, the classification criteria are not met.
  - **CMR effects (carcinogenity, 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**: May cause drowsiness or dizziness.
  - **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.

- **Ecotoxic effects**
  
  - **Remark**: Toxic for fish
  - **Additional ecological information**
    - **General notes**:
      Also poisonous for fish and plankton in water bodies.
      Toxic for aquatic organisms
      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.


**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.

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

**SECTION 14: Transport information**

- **14.1 UN-Number**
  - **ADR, IMDG, IATA**
    UN1133

- **14.2 UN proper shipping name**
  - **ADR**
    1133 ADHESIVES, ENVIRONMENTALLY HAZARDOUS
  - **IMDG**
    ADHESIVES (Solvent naphtha (petroleum), hydrotreated light naphthenic, HEXANES), MARINE POLLUTANT
  - **IATA**
    Adhesives

- **14.3 Transport hazard class(es)**
  - **ADR, IMDG**
    
    ![Flammable liquid symbol]
    
    - **Class**
      3 Flammable liquids.
    - **Label**
      3

  - **IATA**
    
    ![Flammable liquid symbol]
    
    - **Class**
      3 Flammable liquids.
    - **Label**
      3

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

- **14.5 Environmental hazards:**
  - **Product contains environmentally hazardous substances:**
    2,6-di-tert-butyl-p-cresol, Solvent naphtha (petroleum), hydrotreated light naphthenic
  - **Marine pollutant:**
    Yes
  - **Symbol (fish and tree) (ADR):**
    Symbol (fish and tree)

- **14.6 Special precautions for user**
  - **Danger code (Kemler):**
    Warning: Flammable liquids.
  - **EMS Number:**
    F-E,S-D
  - **Stowage Category**
    A

- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**
  Not applicable.
**Transport/Additional information:**

- **ADR**
  - Limited quantities (LQ) 5L
  - Excepted quantities (EQ)
    - Code: E1
    - Maximum net quantity per inner packaging: 30 ml
    - Maximum net quantity per outer packaging: 1000 ml

- **Transport category** 3
- **Tunnel restriction code** E

- **IMDG**
  - Limited quantities (LQ) 5L
  - Excepted quantities (EQ)
    - Code: E1
    - Maximum net quantity per inner packaging: 30 ml
    - Maximum net quantity per outer packaging: 1000 ml

- **UN "Model Regulation":** UN 1133 ADHESIVES, 3, III, ENVIRONMENTALLY HAZARDOUS

**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.
  - **Seveso category**
    - E2 Hazardous to the Aquatic Environment
    - P5c FLAMMABLE LIQUIDS
  - **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
  - **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
  - **National regulations:**
    - **Technical instructions (air):**
      - **Class** | Share in %
        - NK | 77.6
  - **Waterhazard class:** Water hazard class 2 (Self-assessment): hazardous for water.

- **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.

- **Relevant phrases**
  - H225 Highly flammable liquid and vapour.
  - H302 Harmful if swallowed.
  - H304 May be fatal if swallowed and enters airways.
  - H315 Causes skin irritation.
  - H317 May cause an allergic skin reaction.
  - H319 Causes serious eye irritation.
  - H336 May cause drowsiness or dizziness.
  - H400 Very toxic to aquatic life.
  - H410 Very toxic to aquatic life with long lasting effects.
  - H411 Toxic to aquatic life with long lasting effects.

- **Department issuing SDS:** R&D Department
Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

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)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

Asp. Tox. 1: Aspiration hazard, Hazard Category 1

Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

* Data compared to the previous version altered.