

**Safety data sheet**  
according to 1907/2006/EC, Article 31 and 453/2010

Printing date 05.04.2016

Version number 8

Revision: 05.02.2016

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

· **1.1 Product identifier**

· **Trade name:** **K-FLEX 420**

· **Article number:** F018205000

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

· **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

· **Further information obtainable from:** R&D Department

· **1.4 Emergency telephone number:**

+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. 055/4277328; 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

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BULGARIA National Toxicology Centre at National Clinical Toxicology Centre +359 2 9154 233

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CECH REPUBLIC Toxicological Information Centre + 420224919 293

DENMARK Poison Information Centre n +45 82 12 12 12

ESTONIA Estonian Poison Information centre +372 626 93 90

FINLAND Finnish Poison Information Centre +358 9 471977

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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.

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GHS07

Eye Irrit. 2            H319 Causes serious eye irritation.  
STOT SE 3            H336 May cause drowsiness or dizziness.

- 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



GHS02    GHS07    GHS09

- Signal word *Danger*
- Hazard-determining components of labelling:  
Solvent naphtha (petroleum), hydrotreated light naphthenic
- 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  
P210                    Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P241                    Use explosion-proof electrical/ventilating/lighting/equipment.  
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
- 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 of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 92062-15-2 926-605-8 Reg.nr.: 01-2119486291-36	Solvent naphtha (petroleum), hydrotreated light naphthenic ⚠ Flam. Liq. 2, H225; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2 H411; ⚠ STOT SE 3, H336	25-50%
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CAS: 141-78-6 EINECS: 205-500-4 Reg.nr.: 01-2119475103-46	Ethyl acetate ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	20-<25%
CAS: 64742-49-0 931-254-9 Reg.nr.: 01-2119484651-34	Naphtha (petroleum), hydrotreated light ⚠ Flam. Liq. 2, H225; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; STOT SE 3, H336	2.5-<10%
CAS: 67-64-1 EINECS: 200-662-2 Reg.nr.: 01-2119471330-49	Acetone ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	2.5-<10%
CAS: 8050-09-7 EINECS: 232-475-7 Reg.nr.: 01-2119480418-32	Rosin ⚠ Skin Sens. 1, H317	0.1-0.7%
CAS: 128-37-0 EINECS: 204-881-4 Reg.nr.: 01-2119555270-46	2,6-di-tert-butyl-p-cresol ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	0.1-0.2%

· **UVCB (Unknown Variable Complex reaction product or Biological Origin)**

64742-49-0 | Naphtha (petroleum), hydrotreated light

· **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**
- **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:** CO<sub>2</sub>, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:**  
Water  
Water with full jet
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **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**  
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 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.

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Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

· **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.

· **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**

· **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 receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

· **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:**

**141-78-6 Ethyl acetate (<20%)**

WEL Short-term value: 400 ppm

Long-term value: 200 ppm

**67-64-1 Acetone (2.5-<10%)**

WEL Short-term value: 3620 mg/m<sup>3</sup>, 1500 ppm

Long-term value: 1210 mg/m<sup>3</sup>, 500 ppm

· **DNELs**

**141-78-6 Ethyl acetate**

Dermal Long term-Systemic effect 63 mg/kg (workers)

Inhalative Long term-Systemic effect 1468 mg/m<sup>3</sup> (workers)

Long term-Local effect 1468 mg/m<sup>3</sup> (workers)

**64742-49-0 Naphtha (petroleum), hydrotreated light**

Dermal Long term-Systemic effect 13964 mg/kg (workers)

Inhalative Long term-Local effect 5306 mg/m<sup>3</sup> (workers)

**67-64-1 Acetone**

Dermal Long term-Systemic effect 186 mg/kg (workers)

Inhalative Long term-Local effect 2420 mg/m<sup>3</sup> (workers)

· **PNECs**

**141-78-6 Ethyl acetate**

fresh water 0.26 mg/l (frs)

0.26 mg/l (water)

marine water 0.026 mg/l (mar)

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<i>Intermittent release</i>	0.026 mg/l (water) 650 mg/l (water)
<b>67-64-1 Acetone</b>	
<i>fresh water</i>	10.6 mg/l (water)
<i>marine water</i>	1.06 mg/l (water)
<i>Intermittent release</i>	21 mg/l (water)
<i>sediment-marine water</i>	3.04 mg/l (water)
<i>sediment-fresh water</i>	30.4 mg/l (water)
<i>sewage treatment plant</i>	100 mg/l (water)
<i>Soil</i>	29.5 mg/kg (soil)

· **Additional information:** The lists valid during the making were used as basis.

· **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 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:**



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

PVC gloves

· **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.

· **Eye protection:**



Tightly sealed goggles

**SECTION 9: Physical and chemical properties**

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

· **General Information**

· **Appearance:**

**Form:** Fluid

**Colour:** According to product specification

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· <b>Odour:</b>	Characteristic
· <b>Change in condition</b> Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	55 °C
· <b>Flash point:</b>	-20 °C
· <b>Ignition temperature:</b>	> 200 °C
· <b>Self-igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· <b>Explosion limits:</b>	
Lower:	1.2 Vol %
Upper:	11.5 Vol %
· <b>Vapour pressure at 20 °C:</b>	110 hPa
· <b>Density:</b>	Not determined.
· <b>Solubility in / Miscibility with water:</b>	Not miscible or difficult to mix.
· <b>Viscosity:</b>	
Dynamic at 20 °C:	700 mPas
Kinematic:	Not determined.
· <b>Solvent content:</b>	
Organic solvents:	79.4 %
Water:	0.0 %
VOC (EU):	793.8 g/l
· <b>Solids content:</b>	20.6 %
· <b>9.2 Other information</b>	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:**

<b>141-78-6 Ethyl acetate</b>		
Oral	LD50	4935 mg/kg (rabbit)
Inhalative	LC50/4 h	1600 mg/l (rat)
<b>67-64-1 Acetone</b>		
Oral	LD50	5800 mg/kg (rat)
Dermal	LD50	20000 mg/kg (rabbit)

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**128-37-0 2,6-di-tert-butyl-p-cresol**

Oral	LD50	890 mg/kg (rat)
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- **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 (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**  
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.
- **Ecotoxicological 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.
- **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.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

**SECTION 14: Transport information**

- |                                       |  |
|---------------------------------------|--|
| · <b>14.1 UN-Number</b>               |  |
| · <b>ADR, IMDG, IATA</b>              | UN1133   |
| · <b>14.2 UN proper shipping name</b> |  |
| · <b>ADR</b>                          | 1133 ADHESIVES, special provision 640D,<br>ENVIRONMENTALLY HAZARDOUS |

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· **IMDG** ADHESIVES, MARINE POLLUTANT  
· **IATA** Adhesives

· **14.3 Transport hazard class(es)**· **ADR, IMDG**

· **Class** 3 Flammable liquids.  
· **Label** 3

· **IATA**

· **Class** 3 Flammable liquids.  
· **Label** 3

· **14.4 Packing group**· **ADR, IMDG, IATA** II· **14.5 Environmental hazards:** Product contains environmentally hazardous substances:

· **Marine pollutant:** Yes  
Symbol (fish and tree)  
· **Special marking (ADR):** Symbol (fish and tree)

· **14.6 Special precautions for user** Warning: Flammable liquids.

· **Danger code (Kemler):** 33  
· **EMS Number:** F-E,S-D  
· **Stowage Category** B

· **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: E2  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 500 ml  
· **Transport category** 2  
· **Tunnel restriction code** D/E

· **IMDG**  
· **Limited quantities (LQ)** 5L  
· **Excepted quantities (EQ)** Code: E2  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":** UN 1133 ADHESIVES, SPECIAL PROVISION 640D, 3, II, ENVIRONMENTALLY HAZARDOUS

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### 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	79.4

· **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:**

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

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*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.**

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