

Safety data sheet
according to 1907/2006/EC, Article 31 and 830/2015

Printing date 12.07.2018

Version number 10

Revision: 31.05.2018

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

· **1.1 Product identifier**

· **Trade name:** Attivatore RFE

· **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** Activator

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

L'ISOLANTE K-FLEX S.p.A.
Via Don Locatelli, 35 Roncello (MB) 20877 ITALY
Tel. +39 039 68 24.1
E-mail: Kflex-Reach@isolante.com

· **Further information obtainable from:** R&D Dept.

· **1.4 Emergency telephone number:**

Tel. +39 039 68 24.1 (9.00 - 17.00)

ITALIA Centro Antiveleeni 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 Antiveleeni Istituto Scientifico "G. Gaslini" GENOVA tel. 010/5636245; Centro Antiveleeni Azienda Ospedaliera "Careggi" FIRENZE tel. 055/4277328; Centro Antiveleeni "Policlinico Gemelli" ROMA tel. 06/3054343; Centro Antiveleeni Università degli Studi di Roma "La Sapienza" ROMA tel. 06/49970698; Centro Antiveleeni Azienda Ospedaliera "A. Cardarelli" NAPOLI tel. 081/7472870; Centro antiveleeni Azienda Ospedaliera Universitaria FOGGIA tel. 0881/731111

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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.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

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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

Signal word Danger

Hazard-determining components of labelling:

tris(isocyanatophenyl)thiophosphate

Ethyl acetate

Hazard statements

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting equipment.

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

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P280 Wear eye protection / face protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

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

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: 141-78-6	Ethyl acetate	70-90%
EINECS: 205-500-4	Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	
Reg.nr.: 01-2119475103-46		

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CAS: 4151-51-3 Reg.nr.: 01-2119948848-16-0000	tris(isocyanatophenyl)thiophosphate ⚠ Acute Tox. 4, H302	20-40%
CAS: 108-90-7 EINECS: 203-628-5	chlorobenzene ⚠ Flam. Liq. 3, H226; ⚠ Aquatic Chronic 2, H411; ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315	1.5-2.5%

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

None of the ingredients is listed.

· **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:** 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.
- **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.
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.
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.

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Prevent formation of aerosols.

· 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:**

Store the product in well areated local at a temperature between 5 and 35°C. Avoid temperature up 40°C and below 5°C because the product could freeze and coagulate becoming unusable.

· 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**

WEL Short-term value: 400 ppm

Long-term value: 200 ppm

108-90-7 chlorobenzeneWEL Short-term value: 14 mg/m³, 3 ppmLong-term value: 4.7 mg/m³, 1 ppm

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· DNELs**141-78-6 Ethyl acetate**

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

Inhalative Long term-Systemic effect 1,468 mg/m³ (workers)Long term-Local effect 1,468 mg/m³ (workers)**· PNECs****141-78-6 Ethyl acetate**

fresh water 0.26 mg/l (frs)

0.26 mg/l (water)

marine water 26 mg/l (mar)

26 mg/l (water)

Intermittent release 650 mg/l (water)

· 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.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· Respiratory protection: Filter A/P2**· Protection of hands: Rubber gloves****· Material of gloves Butyl rubber, BR**

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· **Penetration time of glove material**

For the mixture of chemicals mentioned below the penetration time has to be at least 240 minutes (Permeation according to EN 374 Part 3: Level 5).

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:	Dark yellow
· Odour:	Characteristic
· Odour threshold:	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

· Melting point/freezing point:	Undetermined.
· Initial boiling point and boiling range:	76-78 °C

· **Flash point:** -4 °C

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** 460 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Explosion limits:**

· Lower:	2.1 Vol %
· Upper:	11.5 Vol %

· **Vapour pressure at 20 °C:** 97 hPa

· Density at 20 °C:	1 g/cm ³
· 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 at 20 °C:	3 mPas
· Kinematic:	Not determined.

· **Solvent content:**

· Organic solvents:	71.0 %
· Water:	0.0 %

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VOC (EU):	710.0 g/l
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Solids content:	29 %
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· 9.2 Other information	No further relevant information available.
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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 swallowed.

· LD/LC50 values relevant for classification:

Oral	LD50	2,000 mg/kg (rat)
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141-78-6 Ethyl acetate

Oral	LD50	4,935 mg/kg (rabbit)
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Inhalative	LC50/4 h	1,600 mg/l (rat)
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108-90-7 chlorobenzene

Oral	LD50	2,910 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:

141-78-6 Ethyl acetate

EC50/48h	165,000 µg/l (daphnia magna)
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- **12.2 Persistence and degradability** No further relevant information available.

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· 12.3 Bioaccumulative potential

141-78-6 Ethyl acetate

LogPow 30

- **12.4 Mobility in soil** No further relevant information available.

- **Additional ecological information:**

- **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

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.

- **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

- **14.1 UN-Number**

- **ADR, IMDG, IATA** UN1173

- **14.2 UN proper shipping name**

- **ADR** 1173 ETHYL ACETATE

- **IMDG, IATA** ETHYL ACETATE

- **14.3 Transport hazard class(es)**

- **ADR, IMDG, IATA**



- **Class** 3 Flammable liquids.

- **Label** 3

- **14.4 Packing group**

- **ADR, IMDG, IATA** II

- **14.5 Environmental hazards:**

- **Marine pollutant:** No

- **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.

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· **Transport/Additional information:**· **ADR**· **Limited quantities (LQ)**

1L

· **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)**

1L

· **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 1173 ETHYL ACETATE, 3, II

* **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 P5c** FLAMMABLE LIQUIDS· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 40· **National regulations:**· **Technical instructions (air):**

Class	Share in %
NK	71.0

· **Waterhazard class:** Water hazard class 1 (Self-assessment): slightly 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.

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.

· **Department issuing SDS:** R&D Dept.· **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

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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 – Category 2

Flam. Liq. 3: Flammable liquids – 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

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

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

*** Data compared to the previous version altered.**

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