

Material Safety Data Sheet

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

SPECIAL THINNER FOR K-FLEX ADHESIVES

1 IDENTIFICATION OF THE ARTICLE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Product name: K-FLEX SPECIAL THINNER

UFI: GPH0-40J5-G00G-0XW2

1.2 Relevant identified uses of the article/mixture and uses advised against

Intended use: Thinner for adhesives recommended for professional use only. Retail sale and use is prohibited

1.3 Details of the supplier of the information sheet

Manufacturer/Supplier:

L'ISOLANTE K-FLEX S.p.A.

via Don Locatelli, 35 20877 Roncello (MB) ITALY

Tel. +39 039 6824.1

e-mail: Kflex-Reach@kflex.com

Further information obtainable from: R&D Dept.

1.4 Emergency telephone number

For urgent inquiries refer to Tel. +39 039 6824.1 9:00 - 17:00

2 HAZARDS IDENTIFICATION

2.1 Classification of the article

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2015/830. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Flammable liquid, category 2 H225 Highly flammable liquid and vapour.

Eye irritation, category 2 H319 Causes serious eye irritation.

Specific target organ toxicity - single exposure, category 3 H336 May cause drowsiness or dizziness.

Hazardous to the aquatic environment, chronic toxicity, category 2 H411 Toxic to aquatic life with long lasting effects.

2.2 Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

SPECIAL THINNER FOR K-FLEX ADHESIVES

Page n. 1 of 21

Material Safety Data Sheet

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

SPECIAL THINNER FOR K-FLEX ADHESIVES

Hazard pictograms:



Signal words: Danger

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.

EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statements:

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

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

P370+P378 In case of fire: use carbon dioxide, foam, chemical powder. Do not use water.

P273 Avoid release to the environment.

Contains: ACETONE, ETHYL ACETATE, HEPTANE

2.3 Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage \geq than 0,1%.

3 COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

N.A.

3.2 Article/Mixtures

Contains:

Identification	Classification 1272/2008 (CLP)	x = Conc. %
CAS 141-78-6 EC 205-500-4 INDEX 607-022-00-5 Reg. no. 01-2119475103-46	ETHYL ACETATE Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066	30 \leq x < 60

SPECIAL THINNER FOR K-FLEX ADHESIVES

Page n. 2 of 21

Material Safety Data Sheet

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

SPECIAL THINNER FOR K-FLEX ADHESIVES

CAS 67-64-1 EC 200-662-2 INDEX 606-001-00-8 Reg. no. 01-2119471330-49	ACETONE Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066	30 ≤ x < 60
CAS 142-82-5 EC 205-563-8 INDEX 601-008-00-2 Reg. no. 01-2119475515-33	HEPTANE Flam. Liq. 2 H225, Asp. Tox. 1 H304, Skin Irrit. 2 H315, STOT SE 3 H336, Aquatic Acute 1 H400 M=1, Aquatic Chronic 1 H410 M=1, Classification note/notes according to Annex VI to the CLP Regulation: C	5 ≤ x < 10

The full wording of hazard (H) phrases is given in section 16 of the sheet.

4 FIRST AID MEASURES

4.1 Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.

INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

4.2 Most important symptoms and effects, both acute and delayed

Specific information on symptoms and effects caused by the product are unknown.

4.3 Indication of any immediate medical attention and special treatment needed

Information not available

5 FIRE-FIGHTING MEASURES

5.1 Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2 Special hazards arising from the substance or mixture

SPECIAL THINNER FOR K-FLEX ADHESIVES

Page n. 3 of 21

Material Safety Data Sheet

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

SPECIAL THINNER FOR K-FLEX ADHESIVES

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

5.3 Advice for fire-fighters

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

Send away individuals who are not suitably equipped. Use explosion-proof equipment. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site.

6.2 Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3 Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4 Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

7 HANDLING AND STORAGE

7.1 Precautions for safe handling

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. When performing transfer operations involving large containers,

SPECIAL THINNER FOR K-FLEX ADHESIVES

Page n. 4 of 21

Material Safety Data Sheet

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

SPECIAL THINNER FOR K-FLEX ADHESIVES

connect to an earthing system and wear antistatic footwear. Vigorous stirring and flow through the tubes and equipment may cause the formation and accumulation of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

7.2 Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Store in a cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

7.3 Specific end use(s)

Information not available

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Regulatory References:

CZE Česká Republika Nařízení vlády č. 246/2018 Sb. Nařízení vlády, kterým se mění nařízení vlády č. 361/2007 Sb., kterým se stanoví podmínky ochrany zdraví při práci, ve znění pozdějších předpisů

DEU Deutschland TRGS 900 - Seite 1 von 69 (Fassung 29.03.2019)- Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte

ESP España LÍMITES DE EXPOSICIÓN PROFESIONAL PARA AGENTES QUÍMICOS EN ESPAÑA 2019 (INSST)

FRA France Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS

FIN Suomi HTP-VÄRDEN 2018. Koncentrationer som befunnits skadliga. SOCIAL- OCH

HÄLSOVÄRDSMINISTERIETS PUBLIKATIONER 10/2018

GRC Ελλάδα ΕΦΗΜΕΡΙΔΑ ΤΗΣ ΚΥΒΕΡΝΗΣΕΩΣ - ΤΕΥΧΟΣ ΠΡΩΤΟ Αρ. Φύλλου 152 - 21 Αυγούστου 2018

HUN Magyarország A pénzügyminiszter 7/2018. (VIII. 29.) PM rendelete a munkahelyek kémiai biztonságáról szóló 25/2000. (IX. 30.) EüM- SZCSM együt. TTeS rendelet módosításáról.

HRV Hrvatska Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 91/18)

ITA Italia Decreto Legislativo 9 Aprile 2008, n.81

POL Polska ROZPORZĄDZENIE MINISTRA RODZINY, PRACY I POLITYKI SPOŁECZNEJ z dnia 12 czerwca 2018 r

ROU România HOTĂRÂRE nr. 584 din 2 august 2018 pentru modificarea Hotărârii Guvernului nr. 1.218/2006 privind stabilirea cerințelor minime de securitate și sănătate în muncă pentru asigurarea protecției lucrătorilor împotriva riscurilor legate de prezența agenților chimici

SWE Sverige Hygieniska gränsvärden, AFS 2018:1

GBR United Kingdom EH40/2005 Workplace exposure limits (Third edition, published 2018)

EU OEL EU Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU)

SPECIAL THINNER FOR K-FLEX ADHESIVES

Page n. 5 of 21

Material Safety Data Sheet

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

SPECIAL THINNER FOR K-FLEX ADHESIVES

2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC.

TLV-ACGIH ACGIH 2020

ETHYL ACETATE						
Threshold Limit Value						
Type	Country	TWA/8h		STEL/15min		Remarks/Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	700	191,1	900	245,7	
AGV	DEU	730	200	1460	400	
MAK	DEU	750	200	1500	400	
VLA	ESP	734	200	1468	400	
VLEP	FRA	734	200	1468	400	
HTP	FIN	730	200	1470	400	
TLV	GRC	734	200	1468	400	
AK	HUN	734		1468		
GVI/KGVI	HRV	734	200	1468	400	
NDS/NDSch	POL	734		1468		
TLV	ROU	400	111	500	139	
NGV/KGV	SWE	550	150	1100	300	
WEL	GBR	734	200	1468	400	
OEL	EU	734	200	1468	400	
TLV-ACGIH		1441	400			

Predicted no-effect concentration - PNEC

Normal value in fresh water 0,24 mg/l

Normal value in marine water 0,02 mg/l

Normal value for fresh water sediment 1,15 mg/kg/d

Normal value for marine water sediment 0,115 mg/kg/d

Normal value of STP microorganisms 650 mg/l

Normal value for the food chain (secondary poisoning) 0,2 g/kg

Normal value for the terrestrial compartment 0,148 mg/kg/d

SPECIAL THINNER FOR K-FLEX ADHESIVES

Page n. 6 of 21

Material Safety Data Sheet

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

SPECIAL THINNER FOR K-FLEX ADHESIVES

Health - Derived no-effect level - DNEL / DMEL								
Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				4,5 mg/kg bw/d				
Inhalation	734 mg/m ³	734 mg/m ³	367 mg/m ³	367 mg/m ³	1468 mg/m ³	1468 mg/m ³	734 mg/m ³	734 mg/kg
Skin				37 mg/kg bw/d				63 mg/kg bw/d

ACETONE						
Threshold Limit Value						
Type	Country	TWA/8h		STEL/15min		Remarks/Observations
		mg/m ³	ppm	mg/m ³	ppm	
TLV	CZE	800	331,2	1500	621	
AGV	DEU	1200	500	2400 (C)	1000 (C)	
MAK	DEU	1200	500	2400	1000	
VLEP	FRA	1210	500	2420	1000	
HTP	FIN	1200	500	1500	630	
TLV	GRC	1780		3560		
AK	HUN	1210				
GVI/KGVI	HRV	1210	500			
VLEP	ITA	1210	500			
NDS/NDSch	POL	600		1800		
TLV	ROU	1210	500			
NGV/KGV	SWE	600	250	1200 (C)	500 (C)	
WEL	GBR	1210	500	3620	1500	
OEL	EU	1210	500			
TLV-ACGIH			250		500	

Predicted no-effect concentration - PNEC

SPECIAL THINNER FOR K-FLEX ADHESIVES

Page n. 7 of 21

Material Safety Data Sheet

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

SPECIAL THINNER FOR K-FLEX ADHESIVES

Normal value in fresh water 10,6 mg/l

Normal value in marine water 21 mg/l

Normal value for fresh water sediment 30,4 mg/kg

Normal value for marine water sediment 3,04 mg/kg

Normal value of STP microorganisms 100 mg/l

Normal value for the terrestrial compartment 33,3 mg/kg

Health - Derived no-effect level - DNEL / DMEL								
Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				62 mg/kg				
Inhalation				200 mg/m3		2420 mg/m3		1210 mg/m3
Skin				62 mg/kg				186 mg/kg

HEPTANE						
Threshold Limit Value						
Type	Country	TWA/8h		STEL/15min		Remarks/Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	1000	240	2000	480	
MAK	DEU	2100	500	2100	500	
VLA	ESP	2085	500			Como n-Eptano
VLEP	FRA	1668	400	2085	500	
TLV	GRC	2000	500	200	500	
AK	HUN	2000				
GVI/KGVI	HRV	2085	500			SKIN
VLEP	ITA	2085	500			
NFS/NDSch	POL	1200		2000		
TLV	ROU	2085	500			
NGV/KGV	SWE	800	200	1200 (C)	300 (C)	
WEL	GBR	2085	500			

SPECIAL THINNER FOR K-FLEX ADHESIVES

Page n. 8 of 21

Material Safety Data Sheet

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

SPECIAL THINNER FOR K-FLEX ADHESIVES

OEL	EU	2085	500			
TLV-ACGIH		1639	400	2049	500	

Health - Derived no-effect level - DNEL / DMEL								
Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				149 mg/kg bw/d				
Inhalation				447 mg/m3				2085 mg/m3
Skin				149 mg/kg bw/d				300 mg/kg bw/d

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

8.2 Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION

Wear category I professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a

Material Safety Data Sheet

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

SPECIAL THINNER FOR K-FLEX ADHESIVES

risk of explosion.

EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, wear a mask with a type AX filter, whose limit of use will be defined by the manufacturer (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance liquid

Colour transparent

Odour characteristic of solvent

Odour threshold Not available

pH Not available

Melting point / freezing point Not available

Initial boiling point 55 °C

Boiling range Not available

Flash point -18 °C

Evaporation Rate Not available

Flammability of solids and gases Not available

Lower inflammability limit 1,2 % (V/V)

SPECIAL THINNER FOR K-FLEX ADHESIVES

Page n. 10 of 21

Material Safety Data Sheet

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

SPECIAL THINNER FOR K-FLEX ADHESIVES

Upper inflammability limit 13 % (V/V)
Lower explosive limit Not available
Upper explosive limit Not available
Vapour pressure 127,05 mmHg
Vapour density Not available
Relative density 0,75
Solubility Immiscible with water
Partition coefficient: n-octanol/water Not available
Auto-ignition temperature Not available
Decomposition temperature Not available
Viscosity Not available
Explosive properties Not available
Oxidising properties Not available

9.2 Other information

Molecular weight 76,094
VOC (Directive 2010/75/EC) : 100,00 % - 750,00 g/litre
VOC (volatile carbon) : 60,69 % - 455,15 g/litre

10 STABILITY AND REACTIVITY

10.1 Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

ETHYL ACETATE

Decomposes slowly into acetic acid and ethanol under the effect of light, air and water.

ACETONE

Decomposes under the effect of heat.

10.2 Chemical stability

The product is stable in normal conditions of use and storage.

10.3 Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

ETHYL ACETATE

Risk of explosion on contact with: alkaline metals,hydrides,oleum.May react violently with: fluorine,strong oxidising agents,chlorosulphuric acid,potassium tert-butoxide.Forms explosive mixtures with: air.

ACETONE

Risk of explosion on contact with: bromine trifluoride,fluorine dioxide,hydrogen peroxide,nitrosyl chloride,2-methyl-1,3

SPECIAL THINNER FOR K-FLEX ADHESIVES

Page n. 11 of 21

Material Safety Data Sheet

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

SPECIAL THINNER FOR K-FLEX ADHESIVES

butadiene, nitromethane, nitrosyl perchlorate. May react dangerously with: potassium tert-butoxide, alkaline hydroxides, bromine, bromoform, isoprene, sodium, sulphur dioxide, chromium trioxide, chromyl chloride, nitric acid, chloroform, peroxymonosulphuric acid, phosphoryl oxychloride, chromosulphuric acid, fluorine, strong oxidising agents, strong reducing agents. Develops flammable gas on contact with: nitrosyl perchlorate.

10.4 Conditions to avoid

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

ETHYL ACETATE

Avoid exposure to: light, sources of heat, naked flames.

ACETONE

Avoid exposure to: sources of heat, naked flames.

10.5 Incompatible materials

ETHYL ACETATE

Incompatible with: acids, bases, strong oxidants, aluminium, nitrates, chlorosulphuric acid. Incompatible materials: plastic materials.

ACETONE

Incompatible with: acids, oxidising substances.

10.6 Hazardous decomposition products

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

ACETONE

May develop: ketenes, irritant substances.

11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

SPECIAL THINNER FOR K-FLEX ADHESIVES

Page n. 12 of 21

Material Safety Data Sheet

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

SPECIAL THINNER FOR K-FLEX ADHESIVES

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation) of the mixture:

Not classified (no significant component)

ATE (Oral) of the mixture:

Not classified (no significant component)

ATE (Dermal) of the mixture:

Not classified (no significant component)

HEPTANE

LD50 (Oral) > 8 mg/kg bw Ratto

LD50 (Dermal) > 20000 mg/kg-bw Coniglio

LC50 (Inhalation) > 23,3 mg/l/4h Ratto

ACETONE

LD50 (Oral) 5800 mg/kg ratto

LD50 (Dermal) > 20 ml/kg coniglio

LC50 (Inhalation) 21,09 ppm/8h ratto

ETHYL ACETATE

LD50 (Oral) 4934 mg/kg dw ratto

LD50 (Dermal) > 20000 mg/kg-bw coniglio

SKIN CORROSION / IRRITATION

Repeated exposure may cause skin dryness or cracking.

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

SPECIAL THINNER FOR K-FLEX ADHESIVES

Page n. 13 of 21

Material Safety Data Sheet

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

SPECIAL THINNER FOR K-FLEX ADHESIVES

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

May cause drowsiness or dizziness

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

12 ECOLOGICAL INFORMATION

12.1 Toxicity

This product is dangerous for the environment and is toxic for aquatic organisms. In the long term, it have negative effects on acquatic environment.

HEPTANE	
LC50 - for Fish	> 13,4 mg/l/96h <i>Oncorhynchus mykiss</i>
EC50 - for Crustacea	3,2 mg/l/48h <i>Daphnia magna</i>
EC50 - for Algae / Aquatic Plants	12 mg/l/72h <i>Pseudokirchneriella subcapitata</i>
Chronic NOEC for Crustacea	2,4 mg/l <i>Daphnia pulex</i>
Chronic NOEC for Algae / Aquatic Plants	> 100 mg/l <i>Scenedesmus subspicatus</i>

ACETONE	
LC50 - for Fish	8120 mg/l/96h <i>Pimephales promelas</i>
EC50 - for Crustacea	8800 mg/l/48h <i>Daphnia</i>
EC50 - for Algae / Aquatic Plants	530 mg/l/72h <i>Alga</i>

ETHYL ACETATE	
LC50 - for Fish	230 mg/l/96h <i>Pimephales promelas</i>
EC50 - for Crustacea	165 mg/l/48h <i>Daphnia magna</i>
Chronic NOEC for Crustacea	2,4 mg/l <i>Daphnia pulex</i>
Chronic NOEC for Algae / Aquatic Plants	> 100 mg/l <i>Scenedesmus subspicatus</i>

SPECIAL THINNER FOR K-FLEX ADHESIVES

Page n. 14 of 21

Material Safety Data Sheet

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

SPECIAL THINNER FOR K-FLEX ADHESIVES

12.2 Persistence and degradability

HEPTANE	
Solubility in water	0,1 - 100 mg/l

Rapidly degradable

ACETONE	
---------	--

Rapidly degradable

ETHYL ACETATE	
Solubility in water	> 10000 mg/l

Rapidly degradable

12.3 Bioaccumulative potential

HEPTANE	
Partition coefficient: n-octanol/water	4,5
BFC	552

ACETONE	
Partition coefficient: n-octanol/water	-0,23
BFC	3

ETHYL ACETATE	
Partition coefficient: n-octanol/water	0,68
BFC	30

12.4 Mobility in soil

HEPTANE	
Partition coefficient: soil/water	2,38

SPECIAL THINNER FOR K-FLEX ADHESIVES

Page n. 15 of 21

Material Safety Data Sheet

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

SPECIAL THINNER FOR K-FLEX ADHESIVES

12.5 Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage \geq than 0,1%.

12.6 Other adverse effects

Information not available

13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

14 TRANSPORT INFORMATION


14.1 UN number

ADR / RID, IMDG, IATA:	1993
------------------------	------

14.2 UN proper shipping name

ADR/RID	FLAMMABLE LIQUID, N.O.S. (ETHYL ACETATE; ACETONE)
IMDG	FLAMMABLE LIQUID, N.O.S. (ETHYL ACETATE; ACETONE; HEPTANE)
IATA	FLAMMABLE LIQUID, N.O.S. (ETHYL ACETATE; ACETONE)

14.3 Transport hazard class(es)

ADR / RID:	Class: 3	Label: 3	
------------	----------	----------	---



SPECIAL THINNER FOR K-FLEX ADHESIVES

Page n. 16 of 21

Material Safety Data Sheet

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



SPECIAL THINNER FOR K-FLEX ADHESIVES

IMDG:	Class: 3	Label: 3	
IATA:	Class: 3	Label: 3	

14.4 Packing Group

ADR / RID, IMDG, IATA:	II
------------------------	----

14.5 Environmental hazards

ADR / RID:	Environmentally Hazardous	
IMDG:	Marine Pollutant	
IATA:	NO	

For Air transport, environmentally hazardous mark is only mandatory for UN 3077 and UN 3082.

14.6 Special Precautions for User

ADR / RID:	HIN - Kemler: 33	Limited Quantities: 1 L	Tunnel restriction code: (D/E)
	Special Provision: 640C		
IMDG:	EMS: F-E, S-E	Limited Quantities: 1 L	
IATA:	Cargo:	Maximum quantity: 60 L	Packaging instructions: 364
	Pass.:	Maximum quantity: 5 L	Packaging instructions: 353
	Special Instructions:	A3	

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

SPECIAL THINNER FOR K-FLEX ADHESIVES

Page n. 17 of 21

Material Safety Data Sheet

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

SPECIAL THINNER FOR K-FLEX ADHESIVES

Information not relevant

15 REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the article/mixture

Seveso Category - Directive 2012/18/EC: P5c-E2

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product

Point	3 - 40
-------	--------

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage \geq than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2 Chemical Safety Assessment

A chemical safety assessment has been performed for the following contained substances

ETHYL ACETATE

ACETONE

HEPTANE

16 OTHER INFORMATION

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flam. Liq. 2	Flammable liquid, category 2
--------------	------------------------------

SPECIAL THINNER FOR K-FLEX ADHESIVES

Page n. 18 of 21

Material Safety Data Sheet

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

SPECIAL THINNER FOR K-FLEX ADHESIVES

Asp. Tox. 1	Aspiration hazard, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H319	Causes serious eye irritation.
H315	Causes skin 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.
EUH066	Repeated exposure may cause skin dryness or cracking.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation

SPECIAL THINNER FOR K-FLEX ADHESIVES

Page n. 19 of 21

Material Safety Data Sheet

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

SPECIAL THINNER FOR K-FLEX ADHESIVES

- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
 2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
 3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
 4. Regulation (EU) 2015/830 of the European Parliament
 5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
 6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
 7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
 8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
 9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
 10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
 11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
 12. Regulation (EU) 2016/1179 (IX Atp. CLP)
 13. Regulation (EU) 2017/776 (X Atp. CLP)
 14. Regulation (EU) 2018/669 (XI Atp. CLP)
 15. Regulation (EU) 2018/1480 (XIII Atp. CLP)
 16. Regulation (EU) 2019/521 (XII Atp. CLP)
 17. Regulation (EU) 2019/1148
 18. Regulation (EU) 2020/217 (XIV Atp. CLP)
- The Merck Index. - 10th Edition
 - Handling Chemical Safety
 - INRS - Fiche Toxicologique (toxicological sheet)
 - Patty - Industrial Hygiene and Toxicology
 - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
 - IFA GESTIS website
 - ECHA website

SPECIAL THINNER FOR K-FLEX ADHESIVES

Page n. 20 of 21

Material Safety Data Sheet

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

SPECIAL THINNER FOR K-FLEX ADHESIVES

- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

CALCULATION METHODS FOR CLASSIFICATION

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.