

Safety Data Sheet

according to Regulation (EC) No 1907/2006

K-Line K-Protect Fluid Spray

Revision date: 20.12.2016

Product code: 1702

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

1.1. Product identifier

K-Line K-Protect Fluid Spray

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

Use of the substance/mixture

Anti-corrosive coating

1.3. Details of the supplier of the safety data sheet

Company name: DKS Technik GmbH
 Street: Gnadenwald 90A
 Place: Product management / development A-6069 Gnadenwald
 Telephone: +46 (0)5223 48488
 e-mail: office@dks.at
 Responsible Department: Product management / development

1.4. Emergency telephone number:

Vergiftungsinformationszentrale Österreich, Tel.: +43 1 406 4343

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:

Aerosol: Aerosol 1

Specific target organ toxicity - single exposure: STOT SE 3

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Extremely flammable aerosol.

Pressurised container: May burst if heated.

May cause drowsiness or dizziness.

Harmful to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

Signal word: Danger

Pictograms:



Hazard statements

H222 Extremely flammable aerosol.
 H229 Pressurised container: May burst if heated.
 H336 May cause drowsiness or dizziness.
 H412 Harmful 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.
 P251 Do not pierce or burn, even after use.
 P271 Use only outdoors or in a well-ventilated area.
 P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

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P501 This material and its container must be disposed of as hazardous waste.

Special labelling of certain mixtures

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
64742-48-9	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics			25 -< 50 %
	919-857-5	649-327-00-6	01-2119463258-33	
	Flam. Liq. 3, STOT SE 3, Asp. Tox. 1; H226 H336 H304 EUH066			
74-98-6	propane			10 -< 25 %
	200-827-9	601-003-00-5	01-2119486944-21	
	Flam. Gas 1, Liquefied gas; H220 H280			
106-97-8	butane			5 -< 10 %
	203-448-7	601-004-00-0	01-2119474691-32	
	Flam. Gas 1, Liquefied gas; H220 H280			
75-28-5	isobutane			5 -< 10 %
	200-857-2	601-004-00-0		
	Flam. Gas 1, Liquefied gas; H220 H280			
25307-17-9	2,2'-(octadec-9-enylimino)bisethanol			< 1 %
	246-807-3		01-2119510876-35	
	Acute Tox. 4, Skin Corr. 1B, Aquatic Acute 1 (M-Factor = 10), Aquatic Chronic 1; H302 H314 H400 H410			

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

Further Information

Note: Each entry in the column EC number that begins with the number "9" is - until the publication the official registration number - one specified by ECHA provisional number for the substance. The above-mentioned substance(s) in this product is (are) identified by CAS number and indeed in Countries that are not subject to the REACH Regulation, or in a regulation which is not in accordance with new naming convention for hydrocarbons have been updated.

SECTION 4: First aid measures**4.1. Description of first aid measures****After inhalation**

Provide fresh air. In case of respiratory tract irritation, consult a physician.

After contact with skin

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. In case of eye irritation consult an ophthalmologist.

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After ingestion

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

No information available.

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

Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Carbon dioxide (CO₂), Foam, Extinguishing powder.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Non-flammable. Vapours can form explosive mixtures with air.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Do not pierce or burn, even after use. If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Advice on protection against fire and explosion

Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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Advice on storage compatibility

No special measures are necessary.

7.3. Specific end use(s)

Anti-corrosive coating

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
106-97-8	Butane	600	1450		TWA (8 h)	WEL
		750	1810		STEL (15 min)	WEL

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
64742-48-9	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics			
Worker DNEL, long-term		dermal	systemic	300 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	1500 mg/m ³
Consumer DNEL, long-term		inhalation	systemic	900 mg/m ³
Consumer DNEL, long-term		dermal	systemic	300 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	300 mg/kg bw/day
25307-17-9	2,2'-(octadec-9-enylimino)bisethanol			
Worker DNEL, long-term		inhalation	systemic	2,122 mg/m ³
Worker DNEL, long-term		dermal	systemic	0,3 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,745 mg/m ³
Consumer DNEL, long-term		dermal	systemic	0,214 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,214 mg/kg bw/day

PNEC values

CAS No	Substance	Value
Environmental compartment		
25307-17-9	2,2'-(octadec-9-enylimino)bisethanol	
Freshwater		0,000214 mg/l
Marine water		0,0000214 mg/l
Freshwater sediment		1,692 mg/kg
Marine sediment		0,1692 mg/kg
Secondary poisoning		2 mg/kg
Soil		5 mg/kg

8.2. Exposure controls

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**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Eye/face protection

Eye glasses with side protection (DIN EN 166)

Hand protection

Tested protective gloves must be worn (DIN EN 374):

NBR (Nitrile rubber) - ($\geq 0,12$ mm), Breakthrough time (maximum wearing time): 480 min.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Protective gloves have to be replaced at the first sign of deterioration.

Protect skin by using skin protective cream.

Skin protection

Wear anti-static footwear and clothing

Respiratory protection

Work in well-ventilated zones or use proper respiratory protection.

gas filtering equipment (EN 141), Filter material/medium: AX

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	Aerosol
Colour:	light brown
Odour:	characteristic

Test method

pH-Value:	not determined
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Changes in the physical state

Melting point:	not determined
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Initial boiling point and boiling range:	-44 °C
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Flash point:	<-20 °C
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Flammability

Solid:	not applicable
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Gas:	not applicable
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Explosive properties

not determined

Lower explosion limits:	0,6 vol. %
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Upper explosion limits:	10,9 vol. %
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Ignition temperature:	>200 °C
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Auto-ignition temperature

Solid:	not applicable
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Gas: not applicable

Decomposition temperature: not determined

Oxidizing properties

Not oxidizing.

Vapour pressure: 8300 hPa
(at 20 °C)Density (at 20 °C): 0,736 g/cm³ DIN 51757

Water solubility: insoluble

Solubility in other solvents

not determined

Partition coefficient: not determined

Vapour density: not determined

Evaporation rate: not determined

Solvent content: 63,50 %

9.2. Other information

Solid content: 35,90 %

No information available.

SECTION 10: Stability and reactivity**10.1. Reactivity**

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information**11.1. Information on toxicological effects**

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Acute toxicity

CAS No	Chemical name			
	Exposure route	Dose	Species	Source
64742-48-9	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics			
	oral	LD50 >5000 mg/kg	Rat	
	dermal	LD50 >5000 mg/kg	Rabbit	
	inhalative (4 h) vapour	LC50 >4951 mg/l	Rat	
106-97-8	butane			
	inhalative (4 h) gas	LC50 273000 ppm	Rat	GESTIS
25307-17-9	2,2'-(octadec-9-enylimino)bisethanol			
	oral	LD50 >300-2000 mg/kg	Rat	

Additional information on tests

This mixture is classified as hazardous according to regulation (EC) No. 1272/2008 [CLP].

Further information

There are no data available on the preparation/mixture itself.

SECTION 12: Ecological information

12.1. Toxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

CAS No	Chemical name				
	Aquatic toxicity	Dose	[h] [d]	Species	Source
25307-17-9	2,2'-(octadec-9-enylimino)bisethanol				
	Acute algae toxicity	ErC50 >0,01-1 mg/l	72 h	Selenastrum capricornutum	
	Acute crustacea toxicity	EC50 >0,01-1 mg/l	48 h	Daphnia magna (Big water flea)	

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
64742-48-9	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics			
		80%		
	Readily biodegradable (according to OECD criteria).			

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
74-98-6	propane	2,36
106-97-8	butane	2,89
75-28-5	isobutane	2,8

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

not applicable

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12.6. Other adverse effects

No information available.

Further information

There are no data available on the preparation/mixture itself.

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations
13.1. Waste treatment methods
Advice on disposal

Dispose of waste according to applicable legislation. Do not mix with other wastes.

List of proposed waste codes/waste designations in accordance with EWC:

Waste disposal number of waste from residues/unused products

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances
 Classified as hazardous waste.

Waste disposal number of contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances
 Classified as hazardous waste.

Contaminated packaging

Remove according to the regulations.

SECTION 14: Transport information
Land transport (ADR/RID)

14.1. UN number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2
14.4. Packing group: -
 Hazard label: 2.1



Classification code: 5F
 Special Provisions: 190 327 344 625
 Limited quantity: 1 L
 Excepted quantity: E0
 Transport category: 2
 Tunnel restriction code: D

Marine transport (IMDG)

14.1. UN number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
 Hazard label: 2.1

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Marine pollutant: no
 Special Provisions: 63, 190, 277, 327, 344, 959
 Limited quantity: 1000 mL
 Excepted quantity: E0
 EmS: F-D, S-U

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 1950
14.2. UN proper shipping name: AEROSOLS, flammable
14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
 Hazard label: 2.1



Special Provisions: A145 A167 A802
 Limited quantity Passenger: 30 kg G
 Passenger LQ: Y203
 Excepted quantity: E0
 IATA-packing instructions - Passenger: 203
 IATA-max. quantity - Passenger: 75 kg
 IATA-packing instructions - Cargo: 203
 IATA-max. quantity - Cargo: 150 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

Stowage Code:
 SW1 Protected from sources of heat.
 SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.

Segregation Code:
 SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 28: Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics; butane; isobutane

2010/75/EU (VOC): 28,335 %

2004/42/EC (VOC): 63,5 % (467 g/l)

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Subcategory according to Directive
2004/42/EC:

Special finishes - All types, VOC limit value: 840 g/l

Additional information

Observe in addition any national regulations!

Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work

Aerosol directive (75/324/EEC).

National regulatory information

Employment restrictions:

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water contaminating class (D):

2 - water contaminating

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

SECTION 16: Other information

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 Harmonized 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

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Relevant H and EUH statements (number and full text)

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H226	Flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)