Safety Data Sheet

according to Regulation (EC) No 1907/2006

Kera-Sep Spray flammable

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

1.1. Product identifier

Kera-Sep Spray flammable

Product code:

11141

UFI: YWY2-T0KK-D004-JKFH

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

Use of the substance/mixture

Restricted to professional users.

1.3. Details of the supplier of the safety data sheet

Company name:	DFS-DIAMON GmbH	
Street:	Ländenstr. 1	
Place:	D-93339 Riedenburg	
Telephone:	+49 (0)9442 9189 0	Telefax: +49 (0)9442 9189 37
e-mail:	info@dfs-diamon.de	
Contact person:	Armin Aunkofer	
e-mail:	armin.aunkofer@dfs-diamon.de	
Internet:	www.dfs-diamon.de	

1.4. Emergency telephone number:

24 hour Emergency Contact: +49 (0) 700 24112112 (DFS)
+1 872 5888271

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Aerosol 1; H222-H229

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Signal word: Danger

Pictograms:



Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
78-78-4	isopentane; 2-methylbutane			1 - < 5 %
	201-142-8	601-085-00-2	01-2119475602-38	
	Flam. Liq. 1, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H224 H336 H304 H411 EUH066			
64-17-5	ethanol, ethyl alcohol			< 1 %
	200-578-6	603-002-00-5	01-2119457610-43	
	Flam. Liq. 2, Eye Irrit. 2; H225 H319			
78-93-3	butanone; ethyl methyl ketone			< 0.1 %
	201-159-0	606-002-00-3	01-2119457290-43	
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066			

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

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
64-17-5	200-578-6	ethanol, ethyl alcohol	< 1 %
	inhalation: LC50 = 124,7 mg/l (vapours); oral: LD50 = 10470 mg/kg		
78-93-3	201-159-0	butanone; ethyl methyl ketone	< 0.1 %
	inhalation: LC50 = 10000 mg/l (vapours); dermal: LD50 = 5000 mg/kg; oral: LD50 = 3300 mg/kg		

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

When in doubt or if symptoms are observed, get medical advice.

After inhalation

Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. If experiencing respiratory symptoms: Call a doctor.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. In case of skin reactions, consult a physician.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Observe risk of aspiration if vomiting occurs. If swallowed, rinse mouth with water (only if the person is conscious). Immediately call a doctor.

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 (CO_2), Foam, Extinguishing powder.
Co-ordinate fire-fighting measures to the fire surroundings.

5.2. Special hazards arising from the substance or mixture

Extremely flammable aerosol. Pressurized container: May burst if heated. Vapours can form explosive mixtures with air.
In case of fire may be liberated: Pyrolysis products, toxic.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. Full protective suit.
Fight fire remotely due to the risk of explosion.

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

General advice

Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Evacuate area.

For non-emergency personnel

Remove all sources of ignition. Provide adequate ventilation. Use personal protection equipment.

For emergency responders

Use personal protection equipment.

6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Explosion risk.

6.3. Methods and material for containment and cleaning up

For containment

Stop leak if safe to do so.

For cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Collect in closed and suitable containers for disposal.
Ventilate affected area.

Other information

Use only antistatically equipped (spark-free) tools.

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

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

Advice on protection against fire and explosion

Do not spray on naked flames or any incandescent material. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air.

Advice on general occupational hygiene

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, drink, smoke, sniff.

Further information on handling

Do not pierce or burn, even after use.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints on joint storage

Do not store together with: Oxidizing agent. Pyrophoric or self-heating substances. Hazardous substances that release flammable gases when in contact with water. Peroxides, flammable liquids. Other potentially explosive hazardous substances.

Further information on storage conditions

Keep away from heat. Protect from sunlight.

7.3. Specific end use(s)

Restricted to professional users.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m³	fib/cm³	Category	Origin
74-84-0	Aliphatic hydrocarbon gases, Alkanes (C1-C3), Ethane	-	-		Asphyxiant	
74-98-6	Aliphatic hydrocarbon gases, Alkanes (C1-C3), Propane	-	-		Asphyxiant	
75-28-5	Butane, all isomers - Isobutane	1000	-		STEL (15 min)	
106-97-8	Butane, all isomers - n-butane	1000	-		STEL (15 min)	
25167-67-3	Butene, mixture of isomers	250	-		TWA (8 h)	
64-17-5	Ethanol	1000	-		STEL (15 min)	
78-78-4	iso-Pentane	1000	-		TWA (8 h)	
78-93-3	Methyl ethyl ketone (MEK) (Butan-2-one)	200	600		TWA (8 h)	
		300	900		STEL (15 min)	
-	Mineral Oil pure, highly & severely refined (Inhalable)	-	5		TWA (8 h)	
115-07-1	Propylene	500	-		TWA (8 h)	

Biological limit values

CAS No	Substance	Parameter	Value	Test material	Sampling time
78-93-3	Butan-2-one	Butan-2-one	70 µmol/L	Urine	Post shift

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
8042-47-5	White mineral oil (petroleum)			
Worker DNEL, long-term		dermal	systemic	217,05 mg/kg bw/day
64-17-5	ethanol, ethyl alcohol			
Worker DNEL, long-term		inhalation	systemic	950 mg/m³
Worker DNEL, acute		inhalation	local	1900 mg/m³
Worker DNEL, long-term		dermal	systemic	343 mg/kg bw/day

PNEC values

CAS No	Substance	
Environmental compartment		Value
64-17-5	ethanol, ethyl alcohol	
Freshwater		0,96 mg/l
Marine water		0,79 mg/l
Freshwater sediment		3,6 mg/kg
Micro-organisms in sewage treatment plants (STP)		580 mg/l
Soil		0,63 mg/kg
78-93-3	butanone; ethyl methyl ketone	
Freshwater		55,8 mg/l
Marine water		55,8 mg/l
Freshwater sediment		284,7 mg/kg
Marine sediment		284,7 mg/kg
Soil		22,5 mg/kg

8.2. Exposure controls






Appropriate engineering controls

Provide adequate ventilation as well as local exhaustion at critical locations.

Individual protection measures, such as personal protective equipment

Eye/face protection

Use eye protection according to EN 166.

Hand protection

Wear suitable gloves tested to EN374.

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. 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.

Skin protection

Wear suitable protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.
Respiratory protection necessary at: exceeding exposure limit values.

Thermal hazards

Flame-retardant protective clothing. Wear anti-static footwear and clothing

Environmental exposure controls

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid (Aerosol)
Colour:	colourless, transparent
Odour:	characteristic
Odour threshold:	not determined

Changes in the physical state

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	not determined
Flash point:	not determined

Flammability

Solid/liquid:	not applicable
Gas:	not applicable
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH-Value:	not determined
Viscosity / kinematic:	not determined
Water solubility:	easily soluble

Solubility in other solvents

not determined

Partition coefficient n-octanol/water:	not determined
Vapour pressure:	not determined
Density:	not determined
Relative vapour density:	not determined
Particle characteristics:	not applicable

9.2. Other information

Other safety characteristics

Explosive properties: Heating may cause an explosion. Vapours can form explosive mixtures with air.

SECTION 10: Stability and reactivity

10.1. Reactivity

Extremely flammable aerosol. Pressurized container: May burst if heated.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Vapours can form explosive mixtures with air.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. heat. UV-radiation/sunlight.

10.5. Incompatible materials

Oxidizing agent. Pyrophoric or self-heating substances. Hazardous substances that release flammable gases when in contact with water. Peroxides, flammable liquids. Other potentially explosive hazardous substances.

10.6. Hazardous decomposition products

In case of fire may be liberated: Pyrolysis products, toxic.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
64-17-5	ethanol, ethyl alcohol				
	oral	LD50 10470 mg/kg	Rat	Manufacturer	OECD 403
	inhalation (4 h) vapour	LC50 124,7 mg/l	Rat	Manufacturer	OECD 401
78-93-3	butanone; ethyl methyl ketone				
	oral	LD50 3300 mg/kg	Rat	Manufacturer	
	dermal	LD50 5000 mg/kg	Rabbit	Manufacturer	
	inhalation (4 h) vapour	LC50 10000 mg/l	Rat	Manufacturer	

Irritation and corrosivity

Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

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.

Information on likely routes of exposure

Eye contact, Skin contact, Inhalation.
Active agent: oral

11.2. Information on other hazards

Endocrine disrupting properties

No information available.

SECTION 12: Ecological information

12.1. Toxicity

The product is not: Ecotoxic.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
64-17-5	ethanol, ethyl alcohol						
	Acute algae toxicity	ErC50	675 mg/l	96 h	Chlorella vulgaris	Manufacturer	OECD 201
	Acute crustacea toxicity	EC50 mg/l	5012	48 h	Ceriodaphnia dubia	Manufacturer	ASTM E729-80
	Fish toxicity	NOEC	250 mg/l	4 d	Brachydanio rerio (zebra-fish)	Manufacturer	OECD 212
78-93-3	butanone; ethyl methyl ketone						
	Acute fish toxicity	LC50 mg/l	3220	96 h	Pimephales promelas (fathead minnow)	Manufacturer	
	Acute crustacea toxicity	EC50 mg/l	> 100	48 h	Daphnia magna (Big water flea)	Manufacturer	

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
64-17-5	ethanol, ethyl alcohol	-0,77

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

Further information

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

Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

Contaminated packaging

Do not pierce or burn, even after use. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID 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

Inland waterways transport (ADN)

14.1. UN number or ID 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

Marine transport (IMDG)

14.1. UN number or ID 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



Special Provisions:	63, 190, 277, 327, 344, 381, 959
Limited quantity:	1000 mL
Excepted quantity:	E0
EmS:	F-D, S-U

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID 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

Warning: Flammable gases.

Pressurised container: May burst if heated. Vapours can form explosive mixtures with air.

14.7. Maritime transport in bulk according to IMO instruments

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 3, Entry 40, Entry 75

2010/75/EU (VOC):	< 100 %
Information according to 2012/18/EU (SEVESO III):	P3a FLAMMABLE AEROSOLS

Additional information

Aerosol directive (75/324/EEC).

National regulatory information

Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).
Water hazard class (D):	1 - slightly hazardous to water

15.2. Chemical safety assessment

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

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s):
1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16.

Abbreviations and acronyms

CLP: Classification, labelling and Packaging
REACH: Registration, Evaluation and Authorization of Chemicals
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN: United Nations
CAS: Chemical Abstracts Service
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration
ATE: Acute toxicity estimate
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate

NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor
PBT: persistent, bioaccumulative, toxic
vPvB: very persistent, very bioaccumulative
ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Regulations concerning the international carriage of dangerous goods by rail
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
IMDG: International Maritime Code for Dangerous Goods
EmS: Emergency Schedules
MFAG: Medical First Aid Guide
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
VOC: Volatile Organic Compounds
SVHC: Substance of Very High Concern
For abbreviations and acronyms, see table at http://abbrev.esdscom.eu

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Aerosol 1; H222-H229	On basis of test data

Relevant H and EUH statements (number and full text)

H222	Extremely flammable aerosol.
H224	Extremely flammable liquid and vapour.
H225	Highly flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H304	May be fatal if swallowed and enters airways.
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.

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.)