

KKS - Products GmbH
 76316 Malsch

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

1.1 Product identifier

CS Spray

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

1.2.1 Relevant uses

Self-defence spray

1.2.2 Uses advised against

None known

1.3 Details of the supplier providing the safety data sheet

CompanyKKS

- Products GmbH
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1.4 Emergency number

Counselling Centre+49

(0)89-19240 (24h) (German and English)

SECTION 2: Potential hazards

2.1 Classification of the substance or mixture

Aerosol 1: H222 Extremely flammable aerosol. H229 Pressurised container: May burst if heated.
 Eye Irrit. 2: H319 Causes severe eye irritation.
 STOT SE 3: H336 May cause drowsiness and dizziness.

2.2 Labelling elements

The determination of the hazardous properties of the mixture is carried out without taking propellant gases or carrier materials into account.

Hazard pictograms



Signal word DANGER

Contains:

Propan-2-ol

Hazard statementsH222

Extremely flammable aerosol.
 H229 Pressurised container: May burst if heated. H319 Causes severe eye irritation.
 H336 May cause drowsiness and dizziness.

Safety instructionsP210

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
 Keep away. Do not smoke.
 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 above 50 °C / 122 °F.
 P337+P313 If eye irritation persists: Get medical advice / attention.
 P280 Wear eye protection.
 P260 Do not breathe vapour / aerosol.
 P312 If you feel unwell, call a POISON CENTRE / doctor.
 P501 Dispose of contents / container in accordance with local / national regulations.

Special labellingContains

: [(2-chlorophenyl)methylene]malononitrile. EUH208 May cause allergic reactions cause.

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2.3 Other hazards

Environmental hazards Contains no PBT or vPvB substances.**Other hazards** Other hazards have not been identified based on current knowledge.

SECTION 3: Composition / information on ingredients

Product type:

The product is a mixture.

Content [%]	Component
10 - <40	Butane CAS: 106-97-8, EINECS/ELINCS: 203-448-7, EU-INDEX: 601-004-00-0, Reg-No.: 01-2119474691-32-XXXX GHS/CLP: Flam. Gas 1: H220 - Press. Gas (*): H280
10 - <40	Propane CAS: 74-98-6, EINECS/ELINCS: 200-827-9, EU-INDEX: 601-003-00-5, Reg-No.: 01-2119486944-21-XXXX GHS/CLP: Flam. Gas 1: H220 - Press. Gas (*): H280
10 - <20	Propan-2-ol CAS: 67-63-0, EINECS/ELINCS: 200-661-7, EU-INDEX: 603-117-00-0, Reg-No.: 01-2119457558-25-XXXX GHS/CLP: Flam. Liq. 2: H225 - Eye Irrit. 2: H319 - STOT SE 3: H336
1 - <5	Ethyl acetate CAS: 141-78-6, EINECS/ELINCS: 205-500-4, EU-INDEX: 607-022-00-5, Reg-No.: 01-2119475103-46-XXXX GHS/CLP: Flam. Liq. 2: H225 - Eye Irrit. 2: H319 - STOT SE 3: H336
0,1 - <0,5	[(2-Chlorophenyl)methylene]malononitrile CAS: 2698-41-1, EINECS/ELINCS: 220-278-9 GHS/CLP: Acute Tox. 3: H301 - Skin Sens. 1: H317 - Resp. Sens. 1: H334 - Aquatic Acute 1: H400, M = 1

Component commentSVHClist (Candidate List of Substances of Very High Concern for authorisation): Contains none or less than 0.1% of the listed substances.
For the wording of the H-phrases listed, see SECTION 16.

SECTION 4: First aid measures

4.1 Description of the first aid measures

General information	Remove contaminated clothing and wash before reuse.
After inhalation	Remove the person to fresh air and ensure unobstructed breathing. If symptoms occur, seek medical treatment.
After skin	contactWash off with soap and water after contact with skin. Consult a doctor if skin irritation persists.
After eye contact	Rinse cautiously with water for several minutes. Contact lenses, if present Remove if possible. Continue rinsing. If eye irritation persists: Seek medical advice/attention.
If swallowed,	seek medical advice immediately .

4.2 Most important symptoms and effects, both acute and delayed

Irritant effects

4.3 Indications for immediate medical help or special treatment

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Extinguishing agent

Suitable extinguishing media	Carbon dioxide (CO2). Water spray. Extinguishing powder. Alcohol-resistant foam.
Unsuitable extinguishing media	Full jet of water .

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5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.
Bursting aerosol cans can be ejected from a fire with great force.

5.3 Advice for firefighters

Use self-contained breathing apparatus.
Fire residues and contaminated extinguishing water must be disposed of in accordance with local official regulations.
Cool endangered containers with water spray.

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

Keep ignition sources away.
Ensure adequate ventilation. Use personal protective equipment.

6.2 Environmental protection measures

Do not allow to enter drains/surface waters/groundwater.

6.3 Methods and material for retention and cleaning

Record mechanically.
Absorb residues with liquid-binding material (e.g. sand). Dispose of the absorbed material in accordance with the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage**7.1 Protective measures for safe handling**

Use only in well-ventilated areas.
Keep away from sources of ignition - Do not smoke.
Vapours may form an explosive mixture with air.
Do not eat, drink, smoke or sniff while working. Wash hands before breaks and at the end of work. Preventive skin protection with skin protection ointment.
Remove contaminated clothing and wash before wearing again.

7.2 Conditions for safe storage taking into account incompatibilities

Provide a solvent-resistant and leak-proof floor. Prevent penetration into the floor safely.
Do not store together with oxidising agents.
Do not store together with food and feed.
Keep container in a well-ventilated place.
Store in a cool place - heating leads to pressure increases and risk of bursting. Protect from heating/overheating.
Keep under lock and key and out of reach of children.

Storage class (TRGS 510)

LGK 2B: Aerosols

7.3 Specific end uses

See Use of the product, SECTION 1.2

SECTION 8: Exposure controls/personal protective equipment**8.1 Parameters to be monitored****Occupational exposure limit values (DE)**

Content [%]	Component
35 - 45	Oxydipropanol
	CAS: 25265-71-8, EINECS/ELINCS: 246-770-3, Reg-No.: 01-2119456811-38-XXXX
	Occupational exposure limit: 100 mg/m ³ , E, H, Y, 11, DFG
	Peak limitation - exceedance factor: 2(II)
10 - <40	Propane
	CAS: 74-98-6, EINECS/ELINCS: 200-827-9, EU-INDEX: 601-003-00-5, Reg-No.: 01-2119486944-21-XXXX
	Occupational exposure limit: 1000 ppm, 1800 mg/m ³ , DFG
	Peak limitation - exceedance factor: 4(II)
10 - <40	Butane
	CAS: 106-97-8, EINECS/ELINCS: 203-448-7, EU-INDEX: 601-004-00-0, Reg-No.: 01-2119474691-32-XXXX
	Occupational exposure limit: 1000 ppm, 2400 mg/m ³ , DFG
	Peak limitation - exceedance factor: 4(II)
10 - <20	Propan-2-ol
	CAS: 67-63-0, EINECS/ELINCS: 200-661-7, EU-INDEX: 603-117-00-0, Reg-No.: 01-2119457558-25-XXXX
	Occupational exposure limit: 200 ppm, 500 mg/m ³ , Y, DFG
	Peak limitation - exceedance factor: 2 (II)
	BAT: Parameter acetone: 25 mg/l, test material: blood, sampling time: end of exposure, or end of shift. Parameter acetone: 25 mg/l, test material: urine, sampling time: end of exposure or shift
1 - <5	Ethyl acetate
	CAS: 141-78-6, EINECS/ELINCS: 205-500-4, EU-INDEX: 607-022-00-5, Reg-No.: 01-2119475103-46-XXXX
	Occupational exposure limit: 400 ppm, 1500 mg/m ³ , Y, DFG
	Peak limitation - exceedance factor: 2(I)

DNEL

Content [%]	Component
10 - <20	Propan-2-ol, CAS: 67-63-0
	Industry, inhalation, long-term - systemic effects: 500 mg/m ³ .
	Industry, dermal, long-term - systemic effects: 888 mg/kg.
	Consumer, oral, long-term - systemic effects: 26 mg/kg.
	Consumer, dermal, long-term - systemic effects: 319 mg/kg.
	Consumer, inhalation, long-term - systemic effects: 89 mg/m ³ .
1 - <5	Ethyl acetate, CAS: 141-78-6
	Industry, inhalation, short term - systemic effects: 1468 mg/m ³ .
	Industry, dermal, long-term - systemic effects: 63 mg/kg bw/d.
	Industry, inhalation, long-term - local effects: 734 mg/m ³ .
	Industry, inhalation, short term - local effects: 1468 mg/m ³ .
	Industry, inhalation, long-term - systemic effects: 734 mg/m ³ .
	Consumer, dermal, long-term - systemic effects: 37 mg/kg bw/d.
	Consumer, inhalation, short term - local effects: 734 mg/m ³ .
	Consumer, inhalation, short term - systemic effects: 734 mg/m ³ .
	Consumer, inhalation, long-term - local effects: 367 mg/m ³ .
	Consumer, inhalation, long-term - systemic effects: 367 mg/m ³ .
	Consumer, oral, long-term - systemic effects: 4.5 mg/kg bw/d.

PNEC

Content [%]	Component
10 - <20	Propan-2-ol, CAS: 67-63-0
	Freshwater, 141 mg/l.
	Sediment (freshwater), 552 mg/kg.
	Sediment (seawater), 552 mg/kg.
	Seawater, 141 mg/l.
	Soil (agricultural), 28 mg/kg.
1 - <5	Ethyl acetate, CAS: 141-78-6
	Oral intake (food), 200 mg/kg.
	Sewage treatment plant/ sewage treatment plant (STP), 650 mg/l.
	Soil (agricultural), 0.24 mg/kg dw.
	Sediment (seawater), 0.125 mg/kg.
	Sediment (freshwater), 1.25 mg/kg.
	Seawater, 0.026 mg/l.
	Fresh water, 0.26 mg/l.

8.2 Exposure controls and monitoring

Additional notes on the design of technical installations	Ensure sufficient ventilation at the workplace.
Eye protection	Goggles
Hand protection	0.4mm butyl rubber, >120 min (EN 374). The specifications are recommendations. For further information, please contact the glove supplier.
Body protection	Lightweight protective clothing
Other protective measures	Avoid contact with eyes and skin. Do not inhale vapours/aerosols. The design of the personal protective equipment must be selected specifically for the workplace, depending on the concentration and quantity of hazardous substances. The chemical resistance of the protective equipment should be clarified with their suppliers.
Respiratory protection	Breathing protection at high concentrations. Short-term filter unit, filter A.
Thermal hazards	
Limitation and monitoring of environmental exposure	Comply with applicable environmental directives limiting discharge to air, water and soil.

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SECTION 9: Physical and chemical properties

9.1 Information on the basic physical and chemical properties

FormAerosol

Colour clear

Odorous

Odour threshold determined

pH value not applicable

pH value [1%] not applicable

Boiling point [°C] not applicable

Flash point [°C] not applicable

Flammability (solid, gaseous) [°C] not applicable

Lower explosion limits not determined

Upper explosion limits not determined

Fire-promotingno

Vapour pressure/gas pressure [kPa] not determined

Density [g/ml] not determined

Bulk density [kg/m³] not applicable

Solubility in water miscible

Partition coefficient [n-octanol/water] Not determined

Viscosity not applicable

Relative vapour density [reference value: air] inapplicable

Evaporation rate not applicable

Melting point [°C] not applicable

Spontaneous combustion [°C] not applicable

Decomposition point [°C] not applicable

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

None known when used as intended.

10.2 Chemical stability

Stable under normal ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

Risk of bursting.

Development of ignitable mixtures possible in air when heated above flash point and/or when sprayed or fogged.

10.4 Conditions to avoid

See SECTION 7.2.

10.5 Incompatible materials

Oxidising agent

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10.6 Hazardous decomposition products

Flammable gases/vapours.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product
ATE-mix, oral, > 2000 mg/kg.

Content [%]	Component
0,1 - <0,5	[(2-Chlorophenyl)methylene]malononitrile, CAS: 2698-41-1 LD50, oral, rat: 178 mg/kg.
10 - <40	Butane, CAS: 106-97-8 LC50, inhalation, rat: 658 mg/L (IUCLID).
10 - <40	Propane, CAS: 74-98-6 LC50, inhalation, rat: > 1443 mg/l (15 min) (Lit.).
10 - <20	Propan-2-ol, CAS: 67-63-0 LD50, dermal, rabbit: 12800 mg/kg (RTECS). LC50, inhalation, rat: 72.6 mg/l/4h (RTECS). LC50, oral, rat: 5045 mg/kg (RTECS). LD0, oral, man: 3570 mg/kg (RTECS).
1 - <5	Ethyl acetate, CAS: 141-78-6 LD50, dermal, rabbit: > 18000 mg/kg. LD50, oral, rat: 5620 mg/kg. LC50, inhalation, rat: 5.86 mg/l 4 h (Lit.).

Serious eye damage/irritation not determined

Corrosive/irritant effect on skin. not determined

Respiratory sensitisation/skin not determined

Specific target organ toxicity at single exposure Not determined

Specific target organ toxicity in case of repeated exposure Not determined

Mutagenicity not determined

Reproductive toxicity. not determined

Carcinogenicity. not determined

General remarks

The ingredient toxicity data listed are intended for healthcare professionals, occupational safety and health professionals and toxicologists.
The determination of the hazardous properties of the mixture is carried out without taking propellant gases or carrier materials into account.

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SECTION 12: Environmental information

12.1 Toxicity

Content [%]	Component
0,1 - <0,5	[(2-Chlorophenyl)methylene]malononitrile, CAS: 2698-41-1
	LC50, (96h), Oncorhynchus mykiss: 0.22 mg/l.
10 - <20	Propan-2-ol, CAS: 67-63-0
	LC50, (96h), Lepomis macrochirus: 1400 mg/l (ECOTOX database).
	EC50, (48h), Daphnia magna: > 13000 mg/l (IUCLID).
	IC50, (72h), Scenedesmus quadricauda (alga): > 1000 mg/l (IUCLID).
1 - <5	Ethyl acetate, CAS: 141-78-6
	LC50, (96h), Pimephales promelas: 230 mg/l (IUCLID).
	EC50, (48h), Daphnia magna: 717 mg/l (IUCLID).
	EC50, (48h), Desmodesmus subspicatus: 3300 mg/l (IUCLID).
	EC10, (16h), Pseudomonas putida: 2900 mg/l (IUCLID).

12.2 Persistence and degradability

Behaviour in environmental compartments not determined

Behaviour in sewage treatment plants. not determined

Biodegradability. not determined

12.3 Bioaccumulative potential

Accumulation in organisms is not expected.

12.4 Mobility in soil

Not determined

12.5 Results of the PBT and vPvB assessment

Based on all available information, not to be classified as PBT or vPvB.

12.6 Other adverse effects

None known

SECTION 13: Disposal instructions

13.1 Waste treatment process

Product residues must be disposed of in compliance with the Waste Directive 2008/98/EC and national and regional regulations. No waste code number according to the European Waste Catalogue (AVV) can be defined for this product, as only the intended use by the consumer allows an allocation. The waste code number must be determined within the EU in consultation with the waste disposal company.

Product

Dispose of as hazardous waste.
Coordinate disposal with the authorities if necessary.

AVV No. (recommended)

160504* Gases containing dangerous substances in pressure containers (including halons).

Uncleaned packaging

Non-contaminated packaging can be recycled.

AVV No. (recommended) substances.

150110* Packaging containing residues of dangerous substances or contaminated by dangerous substances are contaminated.
150104 Metal packaging.

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SECTION 14: Transport information

14.1 UN number

according to UN shipping name see SECTION 14.2

14.2 UN proper shipping name

Land transport according to ADR/RIDUN 1950 Compressed gas packages 2.1

- Classification code5F

- Hazard label



- ADR LQ1

I

- ADR 1.1.3.6 (8.6)

Transport category (tunnel restriction code) 2 (D)

Inland navigation (ADN) UN 1950 Aerosols 2.1

- Classification code5F

- Hazard label



Sea transport in accordance with IMDGUN 1950 Aerosols 2.1 -

- EMSF-D

, S-U

- Hazard label



- IMDG LQ1

I

Air transport according to IATAUN 1950 Aerosols, flammable 2.1

- Hazard label



14.3 Transport hazard classes

according to UN shipping name see SECTION 14.2

14.4 Packing group

according to UN shipping name see SECTION 14.2

14.5 Environmental hazards

according to UN shipping name see SECTION 14.2

14.6 Special precautions for the user

Corresponding information under SECTIONS 6 to 8.

14.7 Carriage in bulk in accordance with Annex II of the MARPOL Convention and the IBC Code

Not determined

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SECTION 15: Legislation**15.1 Safety, health and environmental regulations/specific legislation for the substance or mixture**

EU REGULATIONS 1991/689	(2001/118); 1999/13; 2004/42; 648/2004; 1907/2006 (REACH); 1272/2008; 75/324/EEC (2008/47/EC); 453/2010/EC; (EU) 2015/830
TRANSPORT REGULATIONS ADR	(2015); IMDG Code (2015, 37th Amdt.); IATA-DGR (2015)
NATIONAL REGULATIONS (DE):	Gefahrstoffverordnung - GefStoffV 2011; Wasserhaushaltsgesetz - WHG; TRG 300; TRGS: 200, 615, 900, 905, Notice 220 (TRGS220).
- Water hazard class 1	, according to VwVwS of 27.07.2005 (as of: 2015)
- Major Accidents Ordinance.	yes
- Classification according to TA-Luft 5	.2.5 Organic substances.
- Storage class (TRGS 510)	LGK 2B: Aerosols
- Employment restrictions	Pay attention to employment restrictions for expectant and nursing mothers. Observe employment restrictions for young people.
- VOC (1999/13/EG)	60 %
- Other regulations TRG	300: Storage regulations for pressurised gas packages (aerosols). BGI 621: Leaflet: Solvents (M 017). BGI 595: Instruction sheet: Irritant substances/corrosive substances (M 004). BGI 564: Instruction sheet: Handling substances hazardous to health (for the employee) (M 050).

15.2 Chemical Safety Assessment

inapplicable

SECTION 16: Other information**16.1 Hazard statements (SECTION 3)**

H400 Very toxic to aquatic organisms.
H334 May cause allergy, asthma-like symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction. H301
Toxic if swallowed.
H336 May cause drowsiness and dizziness. H319 Causes severe eye irritation.
H225 Highly flammable liquid and vapour.
H280 Contains gas under pressure; may explode if heated. H220
Extremely flammable gas.

16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
 RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
 ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
 AVV = Waste Catalogue Ordinance
 BGI = Berufsgenossenschaftliche Informationen
 CAS = Chemical Abstracts Service
 CLP = Classification, Labelling and Packaging
 DMEL = Derived Minimum Effect Level
 DNEL = Derived No Effect Level
 EC50 = Median effective concentration
 ECB = European Chemicals Bureau
 EEC = European Economic Community
 EINECS = European Inventory of Existing Commercial Chemical Substances
 ELINCS = European List of Notified Chemical Substances
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
 IC50 = Inhibition concentration, 50%
 IMDG = International Maritime Code for Dangerous Goods
 IUCLID = International Uniform Chemical Information Database
 LC50 = Lethal concentration, 50%
 LD50 = Median lethal dose
 MARPOL = International Convention for the Prevention of Marine Pollution from Ships
 PBT = Persistent, Bioaccumulative and Toxic substance
 PNEC = Predicted No-Effect Concentration
 REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
 TLV@TWA = Threshold limit value - time-weighted average
 TLV@STEL = Threshold limit value - short-time exposure limit
 TRGS = Technical Rules for Hazardous Substances
 VOC = Volatile Organic Compounds
 vPvB = very Persistent and very Bioaccumulative
 VwVwS = Administrative Regulation on Substances Hazardous to Water

16.3 Other information**Classification procedure Aerosol**

1: H222 Extremely flammable aerosol. (Transmission principle "Aerosols") H229 Pressurised container: May burst if heated. (Transmission principle "Aerosols") Eye Irrit. 2: H319 Causes severe eye irritation. (Calculation method)
 STOT SE 3: H336 May cause drowsiness and dizziness. (Calculation method)

Changed positions

no

GV Hazard group Inhalation:

E

GM release group:

high



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