SAFETY DATA SHEET

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2020/878

KLEENSPRAY S

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

1.1. Product identifier

Product name : KLEENSPRAY S
Registration number REACH : Not applicable (mixture)
Product type REACH : Mixture

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

1.2.1 Relevant identified uses

Detergent according to Regulation (EC) No 648/2004

1.2.2 Uses advised against

No uses advised against known

1.3. Details of the supplier of the safety data sheet

Supplier of the safety data sheet

Novatio*
Industrielaan 5B
B-2250 Olen
☎ +32 14 25 76 40
🖷 +32 14 22 02 66
info@novatio.be
*NOVATIO is a registered trademark of Novatech International N.V.

Manufacturer of the product

Novatech International N.V.
Industrielaan 5B
B-2250 Olen
☎ +32 14 85 97 37
🖷 +32 14 85 97 38
info@novatech.be

1.4. Emergency telephone number

24h/24h (Telephone advice: English, French, German, Dutch) :
+32 14 58 45 45 (BIG)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class	Category	Hazard statements
Flam. Liq.	category 2	H225: Highly flammable liquid and vapour.
Asp. Tox.	category 1	H304: May be fatal if swallowed and enters airways.
Eye Irrit.	category 2	H319: Causes serious eye irritation.
STOT SE	category 3	H336: May cause drowsiness or dizziness.
Aquatic Chronic	category 2	H411: Toxic to aquatic life with long lasting effects.

2.2. Label elements

Contains: hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics; propan-2-ol; acetone.

Signal word Danger

H-statements

H225 Highly flammable liquid and vapour.
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.

P-statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 Wear protective gloves and eye protection/face protection.

P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.

Supplemental information

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

Gas/vapour spreads at floor level: ignition hazard
Caution! Substance is absorbed through the skin

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name REACH Registration No	CAS No EC No List No	Conc. (C)	Classification according to CLP	Note	Remark	M-factors and ATE
hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics 01-2119473851-33	920-750-0	C≤70 %	Flam. Liq. 2; H225 Asp. Tox. 1; H304 STOT SE 3; H336 Aquatic Chronic 2; H411 EUH066	(1)(10)	Constituent	
propan-2-ol 01-2119457558-25	67-63-0 200-661-7	C≤20 %	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336	(1)(2)(10)	Constituent	
acetone 01-2119471330-49	67-64-1 200-662-2	C≤20 %	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 EUH066	(1)(2)(10)	Constituent	
n-hexane 01-2119480412-44	110-54-3 203-777-6	C≤2 %	Flam. Liq. 2; H225 Repr. 2; H361f Asp. Tox. 1; H304 STOT RE 2; H373 Skin Irrit. 2; H315 STOT SE 3; H336 Aquatic Chronic 2; H411 STOT RE 2; H373: C≥5%, (CLP Annex VI (ATP 0))	(1)(2)(10)	Constituent	
cyclohexane 01-2119463273-41	110-82-7 203-806-2	C≤2 %	Flam. Liq. 2; H225 Asp. Tox. 1; H304 Skin Irrit. 2; H315 STOT SE 3; H336 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	(1)(2)(10)	Constituent	M: 1 (Acute, ECHA (registration dossier)) M: 1 (Chronic, ECHA (registration dossier))

(1) For H- and EUH-statements in full: see section 16
(2) Substance with a Community workplace exposure limit
(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006
Note: numbers 9xx-xxx-x are provisional list numbers assigned by Echa pending an official EC inventory number

SECTION 4: First aid measures

4.1. Description of first aid measures

General:
Observe (own) safety. If possible, approach victim and check vital functions. In case of injury and/or intoxication, call the European emergency number 112. Treat symptoms starting with most life-threatening injuries and disorders. Keep victim under observation, possibility of delayed symptoms.

After inhalation:
Remove victim into fresh air. In case of respiratory problems, consult a doctor/medical service.

After skin contact:
If possible, wipe up/dry remove chemical. Then rinse/shower immediately with (lukewarm) water. If irritation persists, consult a doctor/medical service.

After eye contact:
Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists, consult a doctor/medical service.

After ingestion:
Rinse mouth with water. If you feel unwell, consult a doctor/medical service. Do not wait for symptoms to occur to consult Poison Center.

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

4.2.1 Acute symptoms

After inhalation:
Dizziness. Drowsiness. Dry/sore throat. Coughing.

After skin contact:
ON CONTINUOUS EXPOSURE/CONTACT: Dry skin. Cracking of the skin.

After eye contact:
Irritation of the eye tissue.

After ingestion:
Risk of aspiration pneumonia. Headache. Nausea. Vomiting. Gastrointestinal complaints.

4.2.2 Delayed symptoms
No effects known.

4.3. Indication of any immediate medical attention and special treatment needed
If applicable and available it will be listed below.

SECTION 5: Firefighting measures

5.1. Extinguishing media

5.1.1 Suitable extinguishing media:
Small fire: Quick-acting ABC powder extinguisher, Quick-acting BC powder extinguisher, Quick-acting class B foam extinguisher, Quick-acting CO2 extinguisher.
Major fire: Class B foam (not alcohol-resistant).

5.1.2 Unsuitable extinguishing media:
Small fire: Water (quick-acting extinguisher, reel); risk of puddle expansion.
Major fire: Water; risk of puddle expansion.

5.2. Special hazards arising from the substance or mixture
Upon combustion: CO and CO2 are formed.

5.3. Advice for firefighters

5.3.1 Instructions:
If exposed to fire cool the closed containers by spraying with water. Do not move the load if exposed to heat. Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it.

5.3.2 Special protective equipment for fire-fighters:
Gloves (EN 374). Protective goggles (EN 166). Protective clothing (EN 14605 or EN 13034). Heat/fire exposure: self-contained breathing apparatus (EN 136 + EN 137).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment. Exposure to fire/heat: keep upwind. Exposure to fire/heat: have neighbourhood close doors and windows.

6.1.1 Protective equipment for non-emergency personnel
See section 8.2

6.1.2 Protective equipment for emergency responders
Gloves (EN 374). Protective goggles (EN 166). Protective clothing (EN 14605 or EN 13034).

Suitable protective clothing
See section 8.2

6.2. Environmental precautions
Contain released product. Dam up the liquid spill. Try to reduce evaporation. Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up
Take up liquid spill into inert absorbent material. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4. Reference to other sections
See section 13.

SECTION 7: Handling and storage
The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1. Precautions for safe handling
Keep away from naked flames/heat. Insufficient ventilation: take precautions against electrostatic charges. Insufficient ventilation: use spark-/explosionproof appliances and lighting system. Insufficient ventilation: keep naked flames/sparks away. Avoid prolonged and repeated contact with skin. Remove contaminated clothing immediately. Keep container tightly closed. Do not discharge the waste into the drain.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements:
Storage temperature: < 50 °C. Meet the legal requirements. Protect against frost. Keep out of direct sunlight. Keep container in a well-ventilated place. Fireproof storeroom. Keep container tightly closed.

7.2.2 Keep away from:
Heat sources, ignition sources, oxidizing agents, reducing agents, (strong) acids, (strong) bases.

7.2.3 Suitable packaging material:
No data available

7.2.4 Non suitable packaging material:
No data available

7.3. Specific end use(s)

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 Occupational exposure

a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

EU

Acetone	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	500 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	1210 mg/m³
Cyclohexane	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	200 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	700 mg/m³
n-Hexane	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	20 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	72 mg/m³

Belgium

Acétone	Time-weighted average exposure limit 8 h	246 ppm
	Time-weighted average exposure limit 8 h	594 mg/m³
	Short time value	492 ppm
	Short time value	1187 mg/m³
Alcool isopropylique	Time-weighted average exposure limit 8 h	200 ppm
	Time-weighted average exposure limit 8 h	500 mg/m³
	Short time value	400 ppm
	Short time value	1000 mg/m³
Cyclohexane	Time-weighted average exposure limit 8 h	100 ppm
	Time-weighted average exposure limit 8 h	350 mg/m³
n-Hexane	Time-weighted average exposure limit 8 h	20 ppm
	Time-weighted average exposure limit 8 h	72 mg/m³

The Netherlands

Aceton	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	500 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	1210 mg/m³
	Short time value (Public occupational exposure limit value)	1000 ppm
	Short time value (Public occupational exposure limit value)	2420 mg/m³
Cyclohexaan	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	200 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	700 mg/m³
	Short time value (Public occupational exposure limit value)	400 ppm
	Short time value (Public occupational exposure limit value)	1400 mg/m³
n-Hexaan	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	20 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	72 mg/m³
	Short time value (Public occupational exposure limit value)	40 ppm
	Short time value (Public occupational exposure limit value)	144 mg/m³

France

Acétone	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	500 ppm
	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	1210 mg/m³
	Short time value (VRC: Valeur réglementaire contraignante)	1000 ppm
	Short time value (VRC: Valeur réglementaire contraignante)	2420 mg/m³
Alcool isopropylique	Short time value (VL: Valeur non réglementaire indicative)	400 ppm
	Short time value (VL: Valeur non réglementaire indicative)	980 mg/m³
Cyclohexane	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	200 ppm
	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	700 mg/m³
	Short time value (VL: Valeur non réglementaire indicative)	375 ppm
	Short time value (VL: Valeur non réglementaire indicative)	1300 mg/m³
	La VLCT n'est pas réglementaire et provient d'une circulaire du ministère chargé du travail.	
n-Hexane	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	20 ppm
	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	72 mg/m³

Germany

Aceton	Time-weighted average exposure limit 8 h (TRGS 900)	500 ppm **(1)**
	Time-weighted average exposure limit 8 h (TRGS 900)	1200 mg/m³ **(1)**
Cyclohexan	Time-weighted average exposure limit 8 h (TRGS 900)	200 ppm **(2)**
	Time-weighted average exposure limit 8 h (TRGS 900)	700 mg/m³ **(2)**
n-Hexan	Time-weighted average exposure limit 8 h (TRGS 900)	50 ppm **(3)**
	Time-weighted average exposure limit 8 h (TRGS 900)	180 mg/m³ **(3)**
Propan-2-ol	Time-weighted average exposure limit 8 h (TRGS 900)	200 ppm **(4)**
	Time-weighted average exposure limit 8 h (TRGS 900)	500 mg/m³ **(4)**

(1) UF: 2 (I)
(2) UF: 4 (II)
(3) UF: 8 (II)
(4) UF: 2 (II)

Austria

2-Propanol Kurzzeitwert für Großguss	**) Kurzzeitwert für Großguss gilt bis 31.12.2013*	
	Tagesmittelwert (MAK)	200 ppm
	Tagesmittelwert (MAK)	500 mg/m³
	Kurzzeitwert 30(Miw) 4x (MAK)	800 ppm
	Kurzzeitwert 30(Miw) 4x (MAK)	2000 mg/m³
2-Propanol	Tagesmittelwert (MAK)	200 ppm
	Tagesmittelwert (MAK)	500 mg/m³
	Kurzzeitwert 15(Miw) 4x (MAK)	800 ppm
	Kurzzeitwert 15(Miw) 4x (MAK)	2000 mg/m³
Aceton	Tagesmittelwert (MAK)	500 ppm
	Tagesmittelwert (MAK)	1200 mg/m³
	Kurzzeitwert 15(Miw) 4x (MAK)	2000 ppm
	Kurzzeitwert 15(Miw) 4x (MAK)	4800 mg/m³
Cyclohexan	Tagesmittelwert (MAK)	200 ppm
	Tagesmittelwert (MAK)	700 mg/m³
	Kurzzeitwert 15(Miw) 4x (MAK)	800 ppm
	Kurzzeitwert 15(Miw) 4x (MAK)	2800 mg/m³
n-Hexan	Tagesmittelwert (MAK)	20 ppm
	Tagesmittelwert (MAK)	72 mg/m³
	Kurzzeitwert 15(Miw) 4x (MAK)	80 ppm
	Kurzzeitwert 15(Miw) 4x (MAK)	288 mg/m³

UK

Acetone	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	500 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	1210 mg/m³
	Short time value (Workplace exposure limit (EH40/2005))	1500 ppm
	Short time value (Workplace exposure limit (EH40/2005))	3620 mg/m³
Cyclohexane	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	100 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	350 mg/m³
	Short time value (Workplace exposure limit (EH40/2005))	300 ppm
	Short time value (Workplace exposure limit (EH40/2005))	1050 mg/m³
n-Hexane	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	20 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	72 mg/m³
Propan-2-ol	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	400 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	999 mg/m³
	Short time value (Workplace exposure limit (EH40/2005))	500 ppm
	Short time value (Workplace exposure limit (EH40/2005))	1250 mg/m³

USA (TLV-ACGIH)

2-propanol	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	200 ppm
	Short time value (TLV - Adopted Value)	400 ppm
Acetone	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	250 ppm
	Short time value (TLV - Adopted Value)	500 ppm
Cyclohexane	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	100 ppm
n-Hexane	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	50 ppm

b) National biological limit values

If limit values are applicable and available these will be listed below.

Germany

Aceton (Aceton)	Urin: expositionsende, bzw. schichtende	80 mg/l	
Cyclohexan (1,2-Cyclohexandiol (nach Hydrolyse))	Urin: bei langzeitexposition: am schichtende nach mehreren vorangegangenen schichten expositionsende, bzw. schichtende	150 mg/g Kreatinin	
Hexan (n-Hexan) (2,5-Hexandion plus 4,5-Dihydroxy-2-Hexanon (nach Hydrolyse))	Urin: expositionsende, bzw. schichtende	5 mg/l	
Propan-2-ol (Aceton)	Urin: expositionsende, bzw. schichtende	25 mg/l	
Propan-2-ol (Aceton)	Vollblut: expositionsende, bzw. schichtende	25 mg/l	

USA (BEI-ACGIH)

2-Propanol (Acetone)	Urine: end of shift at end of workweek	40 mg/L	Background, Nonspecific
Acetone (Acetone)	Urine: end of shift	25 mg/L	Nonspecific
Cyclohexane (1,2-Cyclohexanediol)	Urine: end of shift at end of workweek	50 mg/g creatinine	Nonspecific
n-Hexane (2,5-Hexanedione)	Urine: end of shift	0,5 mg/L	Without hydrolysis

8.1.2 Sampling methods

Product name	Test	Number
Acetone (ketones 1)	NIOSH	1300
Acetone (ketones I)	NIOSH	2555
Acetone (organic and inorganic gases by Extractive FTIR)	NIOSH	3800
Acetone (Volatile Organic compounds)	NIOSH	2549
Acetone	NIOSH	2027
Acetone	NIOSH	3900
Acetone	NIOSH	8319
Acetone	OSHA	69
Cyclohexane (Hydrocarbons, BP36 to 126C)	NIOSH	1500
Cyclohexane	OSHA	1022
Isopropanol (Volatile Organic compounds)	NIOSH	2549
Isopropyl Alcohol (Alcohols I)	NIOSH	1400
Isopropyl Alcohol	NIOSH	3900
Isopropyl Alcohol	OSHA	5001
n-Hexane (Hydrocarbons, BP36 to 126C)	NIOSH	1500
n-Hexane (organic and inorganic gases by Extractive FTIR)	NIOSH	3800

Product name	Test	Number
n-Hexane (Volatile Organic compounds)	NIOSH	2549
n-Hexane	NIOSH	3900

8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

8.1.4 Threshold values

DNEL/DMEL - Workers

hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	2035 mg/m³	
	Long-term systemic effects dermal	773 mg/kg bw/day	

propan-2-ol

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	500 mg/m³	
	Long-term systemic effects dermal	888 mg/kg bw/day	

acetone

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	1210 mg/m³	
	Acute local effects inhalation	2420 mg/m³	
	Long-term systemic effects dermal	186 mg/kg bw/day	

n-hexane

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	75 mg/m³	
	Long-term systemic effects dermal	11 mg/kg bw/day	

cyclohexane

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	700 mg/m³	
	Acute systemic effects inhalation	1400 mg/m³	
	Long-term local effects inhalation	700 mg/m³	
	Acute local effects inhalation	1400 mg/m³	
	Long-term systemic effects dermal	2016 mg/kg bw/day	

DNEL/DMEL - General population

hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	608 mg/m³	
	Long-term systemic effects dermal	699 mg/kg bw/day	
	Long-term systemic effects oral	699 mg/kg bw/day	

propan-2-ol

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	89 mg/m³	
	Long-term systemic effects dermal	319 mg/kg bw/day	
	Long-term systemic effects oral	26 mg/kg bw/day	

acetone

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	200 mg/m³	
	Long-term systemic effects dermal	62 mg/kg bw/day	
	Long-term systemic effects oral	62 mg/kg bw/day	

n-hexane

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	16 mg/m³	
	Long-term systemic effects dermal	5.3 mg/kg bw/day	
	Long-term systemic effects oral	4 mg/kg bw/day	

cyclohexane

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	206 mg/m³	
	Acute systemic effects inhalation	412 mg/m³	
	Long-term local effects inhalation	206 mg/m³	
	Acute local effects inhalation	412 mg/m³	
	Long-term systemic effects dermal	1186 mg/kg bw/day	
	Long-term systemic effects oral	59.4 mg/kg bw/day	

PNEC

acetone

Compartments	Value	Remark
Fresh water	10.6 mg/l	
Marine water	1.06 mg/l	
Fresh water (intermittent releases)	21 mg/l	
STP	100 mg/l	
Fresh water sediment	30.4 mg/kg sediment dw	
Marine water sediment	3.04 mg/kg sediment dw	
Soil	29.5 mg/kg soil dw	

cyclohexane

Compartments	Value	Remark
Fresh water	44.7 µg/l	
Fresh water (intermittent releases)	9 µg/l	
Marine water	4.47 µg/l	
Marine water (intermittent releases)	0.9 µg/l	
STP	3.24 mg/l	
Fresh water sediment	3.6 mg/kg sediment dw	
Marine water sediment	0.36 mg/kg sediment dw	
Soil	0.694 mg/kg soil dw	

8.1.5 Control banding

If applicable and available it will be listed below.

8.2. Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

8.2.1 Appropriate engineering controls

Keep away from naked flames/heat. Insufficient ventilation: take precautions against electrostatic charges. Insufficient ventilation: use spark-/explosionproof appliances and lighting system. Insufficient ventilation: keep naked flames/sparks away. Measure the concentration in the air regularly. Work under local exhaust/ventilation.

8.2.2 Individual protection measures, such as personal protective equipment

Avoid prolonged and repeated contact with skin. Do not eat, drink or smoke during work.

a) Respiratory protection:

Full face mask with filter type A at conc. in air > exposure limit.

b) Hand protection:

Protective gloves against chemicals (EN 374).

Materials	Measured breakthrough time	Thickness	Protection index	Remark
butyl rubber	> 480 minutes	0.7 mm	Class 6	

c) Eye protection:

Protective goggles (EN 166).

d) Skin protection:

Protective clothing (EN 14605 or EN 13034). Head/neck protection.

8.2.3 Environmental exposure controls:

See sections 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical form	Liquid
Colour	Colourless
Odour	Characteristic odour
Odour threshold	No data available in the literature
Melting point	No data available in the literature
Boiling point	57 °C - 140 °C
Flammability	Highly flammable liquid and vapour.
Explosion limits	0.9 - 13 vol %
Flash point	< -18 °C
Auto-ignition temperature	250 °C
Decomposition temperature	No data available in the literature
pH	Not applicable (non-soluble in water)
Kinematic viscosity	1 mm²/s ; 40 °C
Solubility	Water ; insoluble
Log Kow	Not applicable (mixture)
Vapour pressure	43 hPa ; 20 °C
Absolute density	730 kg/m³ ; 20 °C
Relative density	0.73 ; 20 °C
Relative vapour density	No data available in the literature
Particle size	Not applicable (liquid)

9.2. Other information

Evaporation rate	5.6 ; Butyl acetate

SECTION 10: Stability and reactivity

10.1. Reactivity

May be ignited by sparks. Gas/vapour spreads at floor level: ignition hazard.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Precautionary measures

Keep away from naked flames/heat. Insufficient ventilation: take precautions against electrostatic charges. Insufficient ventilation: use spark-/explosionproof appliances and lighting system. Insufficient ventilation: keep naked flames/sparks away.

10.5. Incompatible materials

Oxidizing agents, reducing agents, (strong) acids, (strong) bases.

10.6. Hazardous decomposition products

Upon combustion: CO and CO2 are formed.

SECTION 11: Toxicological information

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

11.1.1 Test results

Acute toxicity

KLEENSPRAY S

No (test)data on the mixture available

Judgement is based on the relevant ingredients

hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	> 5840 mg/kg bw		Rat (male / female)	Experimental value	
Dermal	LD50		2800 mg/kg bw - 3100 mg/kg bw	24 h	Rat (male / female)	Experimental value	Converted value
Inhalation (vapours)	LC50	Equivalent to OECD 403	> 23.3 mg/l air	4 h	Rat (male / female)	Experimental value	

propan-2-ol

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	5840 mg/kg bw		Rat	Experimental value	
Dermal	LD50	Equivalent to OECD 402	16400 ml/kg bw	24 h	Rabbit	Experimental value	
Inhalation (vapours)	LC50	Equivalent to OECD 403	> 10000 ppm	6 h	Rat (male / female)	Experimental value	

acetone

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50		5800 mg/kg		Rat (female)	Experimental value	
Dermal	LD50		> 15800 mg/kg bw	24 h	Rabbit (male)	Experimental value	

n-hexane

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	16000 mg/kg bw		Rat (male / female)	Experimental value	
Dermal	LD50	Equivalent to OECD 402	> 3350 mg/kg bw	4 h	Rabbit (male)	Read-across	
Inhalation (vapours)	LC50	Equivalent to OECD 403	> 17.6 mg/l air	24 h	Rat (male)	Experimental value	

cyclohexane

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	> 5000 mg/kg bw		Rat (male / female)	Experimental value	
Dermal	LD50	Equivalent to OECD 402	> 2000 mg/kg bw		Rabbit (male / female)	Experimental value	
Inhalation (vapours)	LC50	Equivalent to OECD 403	> 32.88 mg/l	4 h	Rat (male / female)	Experimental value	

Conclusion

Not classified for acute toxicity

Corrosion/irritation

KLEENSPRAY S

No (test)data on the mixture available

Classification is based on the relevant ingredients

hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating			24; 48; 72 hrs; 7 days	Rabbit	Experimental value	Single treatment without rinsing
Skin	Slightly irritating	OECD 404	4 h	24; 48; 72 hours	Rabbit	Experimental value	

propan-2-ol

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Irritating	Equivalent to OECD 405		1; 2; 3; 4; 7; 10; 14 days	Rabbit	Experimental value	Single treatment without rinsing
Skin	Not irritating		4 h	4; 24; 48; 72 hours	Rabbit	Experimental value	

acetone

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Irritating	OECD 405	24 h	24; 72 hours	Rabbit	Experimental value	Single treatment with rinsing
Skin	Not irritating		3 day(s)	24; 48; 72 hrs; 4 days	Guinea pig	Experimental value	
Inhalation	Slightly irritating	Human observation study	20 minutes		Human	Literature study	

n-hexane

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	Equivalent to OECD 405		72 hours	Rabbit	Read-across	
Skin	Irritating	Equivalent to OECD 404	24 h	24; 72 hours	Rabbit	Read-across	

cyclohexane

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Slightly irritating	Equivalent to OECD 405		1 hour	Rabbit	Experimental value	
Skin	Not irritating	Equivalent to EU Method B.4	4 h	24; 48; 72 hours	Rabbit	Experimental value	
Skin	Irritating; category 2					Annex VI	

Conclusion

Causes serious eye irritation.

Not classified as irritating to the respiratory system

Not classified as irritating to the skin

Respiratory or skin sensitisation

KLEENSPRAY S

No (test)data on the mixture available

Judgement is based on the relevant ingredients

hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Equivalent to OECD 406			Guinea pig (male / female)	Experimental value	

propan-2-ol

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Dermal	Not sensitizing	OECD 406			Guinea pig (male / female)	Experimental value	

acetone

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Guinea pig maximisation test			Guinea pig (female)	Experimental value	
Skin	Not sensitizing	Human observation			Human	Experimental value	

n-hexane

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Equivalent to OECD 429			Mouse	Read-across	

cyclohexane

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	EU Method B.6			Guinea pig (male / female)	Experimental value	

Conclusion

Not classified as sensitizing for inhalation

Not classified as sensitizing for skin

Specific target organ toxicity

KLEENSPRAY S

No (test)data on the mixture available

Classification is based on the relevant ingredients

hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Inhalation (vapours)	NOAEC	Equivalent to OECD 413	5800 mg/m³ air	Blood	No effect	13 weeks (6h / day, 5 days / week)	Rat (male)	Experimental value

propan-2-ol

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral								Data waiving
Dermal								Data waiving
Inhalation (vapours)	NOAEC	OECD 451	5000 ppm		No adverse systemic effects	104 weeks (6h / day, 5 days / week)	Rat (male / female)	Experimental value
Inhalation (vapours)	Dose level	Equivalent to OECD 403	5000 ppm	Central nervous system	Drowsiness, dizziness	6 h	Rat (male / female)	Experimental value

acetone

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (drinking water)	NOAEL	Equivalent to OECD 408	4.86 mg/kg bw/day - 5.95 mg/kg bw/day		No effect	13 week(s)	Mouse (male / female)	Experimental value
Oral (drinking water)	LOAEL	Equivalent to OECD 408	11.3 mg/kg bw/day	Liver	Histopathology		Mouse (female)	Experimental value
Dermal								Data waiving
Inhalation (vapours)	NOAEC	Subchronic toxicity test	19000 ppm		No effect	8 weeks (5 days / week)	Rat (male)	Experimental value
Inhalation (vapours)	Dose level	Human observation study	361 ppm	Central nervous system	Neurotoxic effects	2 day(s)	Human	Epidemiological study

n-hexane

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	Subchronic toxicity test	567 mg/kg bw/day - 1135 mg/kg bw/day		No effect	13 weeks (5 days / week)	Rat (male)	Experimental value
Oral (stomach tube)	LOAEL	Subchronic toxicity test	3956 mg/kg bw/day	Central nervous system	Neurotoxic effects	17 weeks (5 days / week)	Rat (male)	Experimental value
Dermal								Data waiving
Inhalation (vapours)	LOAEC	Subchronic toxicity test	3000 ppm	Central nervous system	Neurotoxic effects	16 weeks (daily)	Rat (male)	Experimental value
Inhalation (vapours)			STOT SE cat.3		Drowsiness, dizziness			Annex VI

cyclohexane

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral								Data waiving
Dermal								Data waiving
Inhalation (vapours)	NOAEC	EPA OPPTS 870.3465	7000 ppm		No adverse systemic effects	13 weeks (6h / day, 5 days / week)	Rat (male / female)	Experimental value
Inhalation (vapours)	NOAEC	EPA OPPTS 870.3465	500 ppm	Central nervous system	No effect	6 h	Rat (male / female)	Experimental value

Conclusion

May cause drowsiness or dizziness.
Not classified for subchronic toxicity

Mutagenicity (in vitro)

KLEENSPRAY S

No (test)data on the mixture available

Judgement is based on the relevant ingredients

hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Bacteria (S. typhimurium and E. coli)	No effect	Experimental value	
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 473	Rat liver cells	No effect	Experimental value	

propan-2-ol

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value	
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 476	Chinese hamster ovary (CHO)	No effect	Experimental value	

acetone

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value	
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 473	Chinese hamster ovary (CHO)	No effect	Experimental value	

n-hexane

Result	Method	Test substrate	Effect	Value determination	Remark
Negative	OECD 476	Mouse (lymphoma L5178Y cells)	No effect	Experimental value	
Negative	Equivalent to OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value	

cyclohexane

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value	
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 476	Mouse (lymphoma L5178Y cells)	No effect	Experimental value	

Mutagenicity (in vivo)

KLEENSPRAY S

No (test)data on the mixture available

Judgement is based on the relevant ingredients

hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative (Oral (stomach tube))	Equivalent to OECD 474		Mouse (male)	Bone marrow	Experimental value

propan-2-ol

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative (Intraperitoneal)	Equivalent to OECD 474		Mouse (male / female)		Experimental value

acetone

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative (Oral (drinking water))	Micronucleus test	13 week(s)	Mouse (male / female)		Literature study

n-hexane

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative (Inhalation (vapours))		8 weeks (6h / day, 5 days / week)	Mouse (male)		Experimental value

cyclohexane

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative (Inhalation (vapours))	Equivalent to OECD 475	5 days (6h / day)	Rat (male / female)	Bone marrow	Experimental value

Conclusion

Not classified for mutagenic or genotoxic toxicity

Carcinogenicity

KLEENSPRAY S

No (test)data on the mixture available

Judgement is based on the relevant ingredients

hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Unknown								Data waiving

propan-2-ol

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Inhalation (vapours)	NOEL	OECD 451	5000 ppm	104 weeks (6h / day, 5 days / week)	Rat (male / female)	No carcinogenic effect		Experimental value

acetone

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Dermal	NOEL	Carcinogenic toxicity study	79 mg		Mouse (female)	No carcinogenic effect		Literature study

n-hexane

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Inhalation (vapours)	NOAEC	Equivalent to OECD 451	3000 ppm	104 weeks (6h / day, 5 days / week)	Mouse (female)	No carcinogenic effect		Read-across
Inhalation (vapours)	LOAEC	Equivalent to OECD 451	9018 ppm	104 weeks (6h / day, 5 days / week)	Mouse (female)	Tumor formation	Liver	Read-across
Inhalation (vapours)	NOAEC	Equivalent to OECD 451	9018 ppm	104 weeks (6h / day, 5 days / week)	Mouse (male)	No carcinogenic effect		Read-across

Conclusion

Not classified for carcinogenicity

Reproductive toxicity

KLEENSPRAY S

No (test)data on the mixture available

Judgement is based on the relevant ingredients

hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Inhalation (vapours))	NOAEL	Equivalent to OECD 414	31680 mg/m³ air	10 days (6h / day)	Rat	No effect	Foetus	Read-across
Maternal toxicity (Inhalation (vapours))	NOAEL	Equivalent to OECD 414	10560 mg/m³ air	10 days (6h / day)	Rat	No effect		Read-across
	LOAEL	Equivalent to OECD 414	31680 mg/m³ air	10 days (6h / day)	Rat	Maternal toxicity		Read-across
Effects on fertility (Inhalation (vapours))	NOAEL	Equivalent to OECD 416	31680 mg/m³ air		Rat (male / female)	No effect		Read-across

propan-2-ol

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Oral (stomach tube))	NOAEL	Equivalent to OECD 414	400 mg/kg bw/day	10 day(s)	Rat	No effect	Foetus	Experimental value
Maternal toxicity (Oral (stomach tube))	NOAEL	Equivalent to OECD 414	400 mg/kg bw/day	10 day(s)	Rat	No effect		Experimental value
Effects on fertility (Oral (drinking water))	NOAEL	Equivalent to OECD 415	853 mg/kg bw/day		Rat (male / female)	No effect		Experimental value

acetone

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Inhalation (aerosol))	NOAEC	Equivalent to OECD 414	2200 ppm	14 days (gestation, daily)	Rat	No effect	Foetus	Experimental value
	LOAEC	Equivalent to OECD 414	11000 mg/kg bw/day	14 days (gestation, daily)	Rat	Fetotoxicity	Foetus	Experimental value
Maternal toxicity (Inhalation (aerosol))	NOAEC	Equivalent to OECD 414	2200 ppm	14 days (gestation, daily)	Rat	No effect		Experimental value
	LOAEC	Equivalent to OECD 414	11000 ppm	14 days (gestation, daily)	Rat	Maternal toxicity		Experimental value
Effects on fertility (Oral (drinking water))	NOAEL		900 mg/kg bw/day	13 week(s)	Rat (male)	No effect		Experimental value
	LOAEL		3400 mg/kg bw/day	13 week(s)	Rat (male)	Adverse effects on fertility	Male reproductive organ	Experimental value

n-hexane

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Inhalation (vapours))	NOAEC	Equivalent to OECD 414	900 ppm	10 days (gestation, 6h / day)	Rat	No effect		Experimental value
Maternal toxicity (Inhalation (vapours))	NOAEC	Equivalent to OECD 414	3000 ppm	10 days (gestation, 6h / day)	Rat	No effect		Experimental value
	LOAEC	Equivalent to OECD 414	9000 ppm	10 days (gestation, 6h / day)	Rat	Maternal toxicity		Experimental value
Effects on fertility (Inhalation (vapours))	NOAEC	Equivalent to OECD 416	9000 ppm	≥ 13 weeks (6h / day, 5 days / week)	Rat (male / female)	No effect		Experimental value

Classification of this substance according to Annex VI is debatable as it does not correspond to the conclusion from the test

cyclohexane

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Inhalation (vapours))	NOAEC	Equivalent to OECD 414	7000 ppm	10 days (6h / day)	Rat	No effect		Experimental value
Maternal toxicity (Inhalation (vapours))	NOAEC	Equivalent to OECD 414	500 ppm - 2000 ppm	10 days (6h / day)	Rat	No effect		Experimental value
Effects on fertility (Inhalation (vapours))	NOAEC	Equivalent to OECD 416	500 ppm - 2000 ppm	> 11 weeks (6h / day, 5 days / week)	Rat (male / female)	No effect		Experimental value

Conclusion

Not classified for reprotoxic or developmental toxicity

Aspiration hazard

Classification is based on the relevant ingredients

May be fatal if swallowed and enters airways.

Toxicity other effects

KLEENSPRAY S

acetone

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Skin				Skin	Skin dryness or cracking			Literature study

Conclusion

Repeated exposure may cause skin dryness or cracking.

Chronic effects from short and long-term exposure

KLEENSPRAY S

No effects known.

11.2. Information on other hazards

No evidence of endocrine disrupting properties

SECTION 12: Ecological information

12.1. Toxicity

KLEENSPRAY S

No (test)data on the mixture available

Classification is based on the relevant ingredients

hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LL50	OECD 203	3 mg/l - 10 mg/l	96 h	Oncorhynchus mykiss	Semi-static system	Fresh water	Experimental value; Nominal concentration
Acute toxicity crustacea	EL50	OECD 202	4.6 mg/l - 10.0 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; Locomotor effect
Toxicity algae and other aquatic plants	EL50	OECD 201	10 mg/l - 30 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Growth rate
	NOELR	OECD 201	10 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Growth rate

propan-2-ol

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	Equivalent to OECD 203	9640 mg/l - 10000 mg/l	96 h	Pimephales promelas	Flow-through system	Fresh water	Experimental value; Lethal
Acute toxicity crustacea	LC50	Equivalent to OECD 202	> 10000 mg/l	24 h	Daphnia magna	Static system	Fresh water	Experimental value; Locomotor effect
Toxicity algae and other aquatic plants	Toxicity threshold		1800 mg/l	7 day(s)	Scenedesmus quadricauda	Static system	Fresh water	Experimental value; Toxicity test
Long-term toxicity fish	NOELR	Petrotox computer model	> 1000 mg/l	28 day(s)	Brachydanio rerio			Estimated value
Long-term toxicity aquatic crustacea	NOEC		141 mg/l	16 day(s)	Daphnia magna		Fresh water	Experimental value; Growth
Toxicity aquatic micro-organisms	Toxicity threshold	Equivalent to DIN 38412/8	1050 mg/l	16 h	Pseudomonas putida	Static system	Fresh water	Experimental value; Toxicity test
	EC50	ISO 8192	41676 mg/l	30 minutes	Activated sludge			Experimental value

acetone

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	Equivalent to OECD 203	6210 mg/l - 8120 mg/l	96 h	Pimephales promelas	Flow-through system	Fresh water	Experimental value; Measured concentration
Acute toxicity crustacea	LC50		8800 mg/l	48 h	Daphnia pulex	Static system	Fresh water	Experimental value; Nominal concentration
Toxicity algae and other aquatic plants	NOEC		530 mg/l		Algae		Fresh water	
Long-term toxicity aquatic crustacea	NOEC	Equivalent to OECD 211	2212 mg/l	28 day(s)	Daphnia magna	Flow-through system	Fresh water	Experimental value
Toxicity aquatic micro-organisms	EC50	Equivalent to OECD 209	61.15 g/l	30 minutes	Activated sludge	Static system	Fresh water	Experimental value
	EC50		1700 mg/l		Pseudomonas putida			Literature study; Inhibition

n-hexane

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LL50		12.51 mg/l	96 h	Oncorhynchus mykiss		Fresh water	Estimated value; Lethal
Acute toxicity crustacea	EL50		21.85 mg/l	48 h	Daphnia magna		Fresh water	Estimated value; Locomotor effect
Toxicity algae and other aquatic plants	EL50		9.285 mg/l	72 h	Pseudokirchneriella subcapitata		Fresh water	Estimated value; Growth rate
	NOELR		2.077 mg/l	72 h	Pseudokirchneriella subcapitata		Fresh water	Estimated value; Growth rate
Long-term toxicity fish	NOELR		2.8 mg/l	28 day(s)	Oncorhynchus mykiss		Fresh water	Estimated value; Growth rate
Long-term toxicity aquatic crustacea	NOELR		4.888 mg/l	21 day(s)	Daphnia magna		Fresh water	Estimated value; Reproduction
Toxicity aquatic micro-organisms	EL50		48.39 mg/l	48 h	Tetrahymena pyriformis		Fresh water	QSAR; Growth

cyclohexane

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	Equivalent to OECD 203	4.5 mg/l	96 h	Pimephales promelas	Flow-through system	Fresh water	Experimental value; Measured concentration
Acute toxicity crustacea	EC50	Equivalent to OECD 202	0.9 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; Locomotor effect
Toxicity algae and other aquatic plants	EC50	Equivalent to OECD 201	9.3 mg/l	72 h	Pseudokirchneriella subcapitata			Experimental value; Growth rate
Toxicity aquatic micro-organisms	IC50		29 mg/l	15 h	Aerobic micro-organisms			Experimental value; Oxygen consumption

Conclusion

Toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

Biodegradation water

Method	Value	Duration	Value determination
OECD 301F	98 %; GLP	28 day(s)	Read-across

propan-2-ol

Biodegradation water

Method	Value	Duration	Value determination
EU Method C.5	53 %; Oxygen consumption	5 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.92	17.668 h	1.5E6 /cm³	Calculated value

acetone

Biodegradation water

Method	Value	Duration	Value determination
OECD 301B	90.9 %	28 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.92	52.431 day(s)	1.5E6 /cm³	Calculated value

n-hexane

Biodegradation water

Method	Value	Duration	Value determination
OECD 301F	98 %; Oxygen consumption	28 day(s)	Read-across

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.92	23.515 h	1.5E6 /cm³	Calculated value

cyclohexane

Biodegradation water

Method	Value	Duration	Value determination
OECD 301F	77 %; Oxygen consumption	28 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.92	15 h	1.5E6 /cm³	QSAR

Conclusion

Water

Not readily biodegradable in water

12.3. Bioaccumulative potential

KLEENSPRAY S

Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

Log Kow

Method	Remark	Value	Temperature	Value determination
	No data available in the literature			

propan-2-ol

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF	BCFBAF v3.01	1015			Estimated value

Log Kow

Method	Remark	Value	Temperature	Value determination
		0.05	25 °C	Weight of evidence approach

acetone

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		0.69		Pisces	Literature study

Log Kow

Method	Remark	Value	Temperature	Value determination
		-0.23		Test data

n-hexane

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		501.187		Pimephales promelas	Calculated value

Log Kow

Method	Remark	Value	Temperature	Value determination
Equivalent to OECD 107		4	20 °C	Experimental value

cyclohexane

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		167 l/kg; Fresh weight		Pimephales promelas	QSAR

Log Kow

Method	Remark	Value	Temperature	Value determination
		3.4	25 °C	Experimental value

Conclusion

Contains bioaccumulative component(s)

12.4. Mobility in soil

hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level III	14.6 %	0 %	55.6 %	26.4 %	3.4 %	Calculated value

propan-2-ol

(log) Koc

Parameter	Method	Value	Value determination
log Koc	SRC PCKOCWIN v2.0	0.185 - 0.541	Calculated value

acetone

(log) Koc

Parameter	Method	Value	Value determination
log Koc	SRC PCKOCWIN v2.0	0.374 - 0.988	Calculated value

n-hexane

(log) Koc

Parameter	Method	Value	Value determination
log Koc		3.34	QSAR

cyclohexane

(log) Koc

Parameter	Method	Value	Value determination
log Koc		2.9	QSAR

Conclusion

Contains component(s) that adsorb(s) into the soil
Contains component(s) with potential for mobility in the soil

12.5. Results of PBT and vPvB assessment

Does not contain component(s) that meet(s) the criteria of PBT and/or vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006.

12.6. Endocrine disrupting properties

No evidence of endocrine disrupting properties

12.7. Other adverse effects

KLEENSPRAY S

Greenhouse gases

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

Groundwater

Groundwater pollutant

propan-2-ol

Groundwater

Groundwater pollutant

acetone

Groundwater

Groundwater pollutant

cyclohexane

Groundwater

Groundwater pollutant

SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1. Waste treatment methods

13.1.1 Provisions relating to waste

European Union

Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.
Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).
20 01 29* (separately collected fractions (except 15 01): detergents containing hazardous substances). Depending on branch of industry and production process, also other waste codes may be applicable.

13.1.2 Disposal methods

Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Do not discharge into drains or the environment. Dispose of at authorized waste collection point.

13.1.3 Packaging/Container

European Union

Waste material code packaging (Directive 2008/98/EC).
15 01 10* (packaging containing residues of or contaminated by dangerous substances).

SECTION 14: Transport information

Road (ADR)

14.1. UN number

UN number	1993

14.2. UN proper shipping name

Proper shipping name	flammable liquid, n.o.s. (hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics)

14.3. Transport hazard class(es)

Hazard identification number	33
Class	3
Classification code	F1

14.4. Packing group

Packing group	II
Labels	3

14.5. Environmental hazards

Environmentally hazardous substance mark	yes

14.6. Special precautions for user

Special provisions	274
Special provisions	601
Special provisions	640D
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg (gross mass).

Rail (RID)

14.1. UN number

UN number	1993

14.2. UN proper shipping name

Proper shipping name	flammable liquid, n.o.s. (hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics)

14.3. Transport hazard class(es)

Hazard identification number	33
Class	3
Classification code	F1

14.4. Packing group

Packing group	II
Labels	3

14.5. Environmental hazards

Environmentally hazardous substance mark	yes

14.6. Special precautions for user

Special provisions	274
Special provisions	601
Special provisions	640D
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg (gross mass).

Inland waterways (ADN)

14.1. UN number/ID number

UN number/ID number	1993

14.2. UN proper shipping name

Proper shipping name	flammable liquid, n.o.s. (hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics)

14.3. Transport hazard class(es)

Class	3
Classification code	F1

14.4. Packing group

Packing group	II
Labels	3

14.5. Environmental hazards

Environmentally hazardous substance mark	yes

14.6. Special precautions for user

Special provisions	274

Special provisions	601
Special provisions	640D
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg (gross mass).

Sea (IMDG/IMSBC)

14.1. UN number

UN number	1993

14.2. UN proper shipping name

Proper shipping name	flammable liquid, n.o.s. (hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics)

14.3. Transport hazard class(es)

Class	3

14.4. Packing group

Packing group	II
Labels	3

14.5. Environmental hazards

Marine pollutant	P
Environmentally hazardous substance mark	yes

14.6. Special precautions for user

Special provisions	274
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg (gross mass).

14.7. Maritime transport in bulk according to IMO instruments

Annex II of MARPOL 73/78	Not applicable, based on available data

Air (ICAO-TI/IATA-DGR)

14.1. UN number/ID number

UN number/ID number	1993

14.2. UN proper shipping name

Proper shipping name	flammable liquid, n.o.s. (hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics)

14.3. Transport hazard class(es)

Class	3

14.4. Packing group

Packing group	II
Labels	3

14.5. Environmental hazards

Environmentally hazardous substance mark	yes

14.6. Special precautions for user

Special provisions	A3

Passenger and cargo transport

Limited quantities: maximum net quantity per packaging	1 L

SECTION 15: Regulatory information

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

European legislation:

Explosives precursors

Due to the presence of one or more components in this mixture, acquisition, introduction, possession or use of this product by the general public is restricted by Regulation (EU) 2019/1148. All suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

VOC content Directive 2010/75/EU

VOC content	Remark
100.00 %	
730.000 g/l	

Directive 2012/18/EU (Seveso III)

Threshold values under special circumstances

Substance or category	Special circumstances	Low tier (tonnes)	Top tier (tonnes)	Group	For this substance or mixture the summation rule has to be applied for:
P5b FLAMMABLE LIQUIDS	Particular processing conditions, such as high pressure or high temperature, may create major-accident hazards	50	200	None	Flammability
P5a FLAMMABLE LIQUIDS	Maintained at a temperature above the boiling point	10	50	None	Flammability

Threshold values under normal circumstances

Substance or category	Low tier (tonnes)	Top tier (tonnes)	Group	For this substance or mixture the summation rule has to be applied for:
E2 Hazardous to the Aquatic Environment in Category Chronic 2	200	500	None	Eco-toxicity
P5c FLAMMABLE LIQUIDS	5000	50000	None	Flammability

Ingredients according to Regulation (EC) No 648/2004 and amendments

≥30% aliphatic hydrocarbons

REACH Annex XVII - Restriction

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

	Designation of the substance, of the group of substances or of the mixture	Conditions of restriction
· hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics · propan-2-ol · acetone · n-hexane · cyclohexane	Liquid substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: (a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F; (b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10; (c) hazard class 4.1; (d) hazard class 5.1.	1. Shall not be used in: — ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, — tricks and jokes, — games for one or more participants, or any article intended to be used as such, even with ornamental aspects, 2. Articles not complying with paragraph 1 shall not be placed on the market. 3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they: — can be used as fuel in decorative oil lamps for supply to the general public, and, — present an aspiration hazard and are labelled with H304, 4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN). 5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met: a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: “Keep lamps filled with this liquid out of the reach of children”; and, by 1 December 2010, “Just a sip of lamp oil — or even sucking the wick of lamps — may lead to life- threatening lung damage”; b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: “Just a sip of grill lighter may lead to life threatening lung damage”; c) lamp oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.
· hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics · propan-2-ol · acetone · n-hexane · cyclohexane	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to that Regulation or not.	1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following: — metallic glitter intended mainly for decoration, — artificial snow and frost, — “whoopee” cushions, — silly string aerosols, — imitation excrement, — horns for parties, — decorative flakes and foams, — artificial cobwebs, — stink bombs. 2. Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with: “For professional users only”. 3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/ 324/EEC. 4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated.
· cyclohexane	Cyclohexane	1. Shall not be placed on the market for the first time after 27 June 2010, for supply to the general public, as a constituent of neoprene-based contact adhesives in concentrations equal to or greater than 0,1 % by weight in package sizes greater than 350 g. 2. Neoprene-based contact adhesives containing cyclohexane and not conforming to paragraph 1 shall not be placed on the market for supply to the general public after 27 December 2010. 3. Without prejudice to other Community legislation concerning the classification, packaging and labelling of substances and mixtures, suppliers shall ensure before the placing on the market that neoprene-based contact adhesives containing cyclohexane in concentrations equal to or greater than 0,1 % by weight that are placed on the market for supply to the general public after 27 December 2010 are visibly, legibly and indelibly marked as follows: “— This product is not to be used under conditions of poor ventilation. — This product is not to be used for carpet laying.”
· propan-2-ol · acetone · n-hexane · cyclohexane	Substances falling within one or more of the following points: (a) substances classified as any of the following in Part 3 of Annex VI to Regulation (EC) No 1272/2008:	Mixtures for tattooing purposes are subject to the restrictions of Regulation (EU) 2020/2081

	— carcinogen category 1A, 1B or 2, or germ cell mutagen category 1A, 1B or 2, but excluding any such substances classified due to effects only following exposure by inhalation — reproductive toxicant category 1A, 1B or 2 but excluding any such substances classified due to effects only following exposure by inhalation — skin sensitiser category 1, 1A or 1B — skin corrosive category 1, 1A, 1B or 1C or skin irritant category 2 — serious eye damage category 1 or eye irritant category 2 (b) substances listed in Annex II to Regulation (EC) No 1223/2009 of the European Parliament and of the Council (c) substances listed in Annex IV to Regulation (EC) No 1223/2009 for which a condition is specified in at least one of the columns g, h and i of the table in that Annex (d) substances listed in Appendix 13 to this Annex. The ancillary requirements in paragraphs 7 and 8 of column 2 of this entry apply to all mixtures for use for tattooing purposes, whether or not they contain a substance falling within points (a) to (d) of this column of this entry.	

National legislation Belgium

KLEENSPRAY S

No data available

propan-2-ol

Agents cancérigènes, mutagènes et reprotoxiques et aux agents possédant des propriétés perturbant le système endocrinien (Code du bien-être au travail, Livre VI, titre 2)	alcool isopropylique; VI.2.2.; Liste des procédés au cours desquels une substance ou un mélange se dégage; Procédé à l'acide fort dans la fabrication d'alcool isopropylique.

National legislation The Netherlands

KLEENSPRAY S

Waterbezwaarlijkheid	B (2); Algemene Beoordelingsmethodiek (ABM)

n-hexane

SZW - Lijst van voor de voortplanting giftige stoffen (vruchtbaarheid)	n-hexaan; Opgenomen in SZW-lijst van voor de voortplanting giftige stoffen (vruchtbaarheid); 2

National legislation France

KLEENSPRAY S

No data available

n-hexane

Catégorie toxique pour la reproduction	n-Hexane; R2

National legislation Germany

KLEENSPRAY S

Lagerklasse (TRGS510)	3: Entzündbare Flüssigkeiten
WGK	1; Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) - 18. April 2017

hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

TA-Luft	5.2.5

propan-2-ol

TA-Luft	5.2.5
TRGS900 - Risiko der Fruchtschädigung	Propan-2-ol; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden

acetone

TA-Luft	5.2.5
TRGS900 - Risiko der Fruchtschädigung	Aceton; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden

n-hexane

TA-Luft	5.2.5/I
TRGS900 - Risiko der Fruchtschädigung	n-Hexan; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden

cyclohexane

TA-Luft	5.2.5

National legislation Austria

KLEENSPRAY S

No data available

n-hexane

Fortpflanzungsgefährdend [Beeinträchtigung der Fortpflanzungsfähigkeit (Fruchtbarkeit)]	n-Hexan; f

National legislation United Kingdom

KLEENSPRAY S

No data available

Other relevant data

KLEENSPRAY S

No data available

propan-2-ol

IARC - classification	3; Isopropanol
TLV - Carcinogen	2-propanol; A4

acetone

TLV - Carcinogen	Acetone; A4

n-hexane

TLV - Skin absorption	n-Hexane; Skin; Danger of cutaneous absorption

15.2. Chemical safety assessment

No chemical safety assessment is required for a mixture.

SECTION 16: Other information

Full text of any H- and EUH-statements referred to under section 3:

H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H361f Suspected of damaging fertility.
H373 May cause damage to organs (nervous system) through prolonged or repeated exposure if inhaled.
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.

(*)	INTERNAL CLASSIFICATION BY BIG
ADI	Acceptable daily intake
AOEL	Acceptable operator exposure level
ATE	Acute Toxicity Estimate
BCF	Bioconcentration Factor
BEI	Biological Exposure Indices
CLP (EU-GHS)	Classification, labelling and packaging (Globally Harmonised System in Europe)
DMEL	Derived Minimal Effect Level
DNEL	Derived No Effect Level
EC10	Effect Concentration 10 %
EC50	Effect Concentration 50 %
ErC50	EC50 in terms of reduction of growth rate
GLP	Good Laboratory Practice
LC0	Lethal Concentration 0 %
LC50	Lethal Concentration 50 %
LD50	Lethal Dose 50 %
LOAEC/LOAEL	Lowest Observed Adverse Effect Concentration/Lowest Observed Adverse Effect Level
NOAEC/NOAEL	No Observed Adverse Effect Concentration/No Observed Adverse Effect Level
NOEC/NOEL	No Observed Effect Concentration/No Observed Effect Level
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent, Bioaccumulative & Toxic
PNEC	Predicted No Effect Concentration
STP	Sludge Treatment Process
vPvB	very Persistent & very Bioaccumulative

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