

SAFETY DATA SHEET

HANSA/FLEX

Cleaner Spray S

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

1.1 Product identifier

Product name : Cleaner Spray S
Product code : hansa
Color : Colorless.

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

Identified uses

Aerosol product-Cleaning agent

1.3 Details of the supplier of the safety data sheet

HANSA-FLEX AG
Zum Panrepel 44, D-28307 Bremen
Phone: +49 421/48907-0
Fax: +49 421/48907-88
E-Mail: info@hansa-flex.com
Internet: www.hansa-flex.com

e-mail address of person responsible for this SDS : info@hansa-flex.com

1.4 Emergency telephone number

Giftinformationszentrum Nord GIZ-Nord
+49(0)551-19 240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Aerosol 1, H222, H229
Skin Irrit. 2, H315
Eye Irrit. 2, H319
STOT SE 3, H336
Aquatic Chronic 2, H411

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms

:



Signal word

: Danger

Hazard statements

: H222, H229 - Extremely flammable aerosol. Pressurized container: may burst if heated.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H336 - May cause drowsiness or dizziness.
H411 - Toxic to aquatic life with long lasting effects.

SECTION 2: Hazards identification

Precautionary statements

Prevention	: P280 - Wear protective gloves. Wear eye or face protection. 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. P271 - Use only outdoors or in a well-ventilated area. P273 - Avoid release to the environment. P261 - Avoid breathing dust or mist. P264 - Wash thoroughly after handling. P251 - Do not pierce or burn, even after use.
Response	: P391 - Collect spillage. P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell. P362 + P364 - Take off contaminated clothing and wash it before reuse. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.
Storage	: P405 - Store locked up. P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
Disposal	: P501 - Dispose of waste according to applicable legislation.
Hazardous ingredients	: Naphtha (petroleum), hydrotreated light Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane
Supplemental label elements	: Contains (R)-p-mentha-1,8-diene. May produce an allergic reaction.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII	: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Other hazards which do not result in classification	: Aspiration hazard - Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Naphtha (petroleum), hydrotreated light	REACH #: 01-2119475515-33 EC: 265-151-9 CAS: 64742-49-0	≥25 - ≤50	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	-	[1] [2]
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	REACH #: 01-2119475514-35 EC: 921-024-6	≥25 - ≤50	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2,	-	[1]

Cleaner Spray S

SECTION 3: Composition/information on ingredients

acetone	REACH #: 01-2119471330-49 EC: 200-662-2 CAS: 67-64-1 Index: 606-001-00-8	≥10 - <20	H411 Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066	-	[1] [2]
isobutane	REACH #: 01-2119485395-27 EC: 200-857-2 CAS: 75-28-5 Index: 601-004-00-0	≤10	Flam. Gas 1A, H220 Press. Gas (Comp.), H280	-	[2]
carbon dioxide	REACH #: Annex IV EC: 204-696-9 CAS: 124-38-9	≤5	Press. Gas (Comp.), H280	-	[2]
propane	REACH #: 01-2119486944-21 EC: 200-827-9 CAS: 74-98-6 Index: 601-003-00-5	≤5	Flam. Gas 1A, H220 Press. Gas (Comp.), H280	-	[2]
propan-2-ol	REACH #: 01-2119457558-25 EC: 200-661-7 CAS: 67-63-0 Index: 603-117-00-0	≤5	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	-	[1] [2]
ethanol	REACH #: 01-2119457610-43 EC: 200-578-6 CAS: 64-17-5 Index: 603-002-00-5	≤5	Flam. Liq. 2, H225	-	[2]
(R)-p-mentha-1,8-diene	REACH #: 01-2119529223-47 EC: 227-813-5 CAS: 5989-27-5 Index: 601-096-00-2	<1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 3, H412 See Section 16 for the full text of the H statements declared above.	M [Acute] = 1	[1] [2]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

5.3 Advice for firefighters

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and materials for containment and cleaning up

: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

SECTION 6: Accidental release measures

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance.

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Avoid breathing vapor or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
P3a E2	150 tonne 200 tonne	500 tonne 500 tonne

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Naphtha (petroleum), hydrotreated light acetone	TRGS 900 OEL (Germany). Schichtmittelwert: 700 mg/m ³ 8 hours. Kurzzeitwert: 1400 mg/m ³ , 2 times per shift, 15 minutes. TRGS 900 OEL (Germany, 4/2023). TWA: 1200 mg/m ³ 8 hours. PEAK: 2400 mg/m ³ 15 minutes. TWA: 500 ppm 8 hours. PEAK: 1000 ppm 15 minutes.

SECTION 8: Exposure controls/personal protection

isobutane

DFG MAC-values list (Germany, 7/2022).

TWA: 500 ppm 8 hours.
PEAK: 1000 ppm, 4 times per shift, 15 minutes.
TWA: 1200 mg/m³ 8 hours.
PEAK: 2400 mg/m³, 4 times per shift, 15 minutes.

TRGS 900 OEL (Germany, 7/2021).

TWA: 2400 mg/m³ 8 hours.
PEAK: 9600 mg/m³ 15 minutes.
TWA: 1000 ppm 8 hours.
PEAK: 4000 ppm 15 minutes.

DFG MAC-values list (Germany, 10/2021). [Butane]

TWA: 1000 ppm 8 hours.
PEAK: 4000 ppm, 4 times per shift, 15 minutes.
TWA: 2400 mg/m³ 8 hours.
PEAK: 9600 mg/m³, 4 times per shift, 15 minutes.

carbon dioxide

TRGS 900 OEL (Germany, 4/2023).

TWA: 9100 mg/m³ 8 hours.
PEAK: 18200 mg/m³ 15 minutes.
TWA: 5000 ppm 8 hours.
PEAK: 10000 ppm 15 minutes.

DFG MAC-values list (Germany, 7/2022).

TWA: 5000 ppm 8 hours.
PEAK: 10000 ppm, 4 times per shift, 15 minutes.
TWA: 9100 mg/m³ 8 hours.
PEAK: 18200 mg/m³, 4 times per shift, 15 minutes.

propane

TRGS 900 OEL (Germany, 4/2023).

TWA: 1800 mg/m³ 8 hours.
PEAK: 7200 mg/m³ 15 minutes.
TWA: 1000 ppm 8 hours.
PEAK: 4000 ppm 15 minutes.

DFG MAC-values list (Germany, 7/2022).

TWA: 1000 ppm 8 hours.
PEAK: 4000 ppm, 4 times per shift, 15 minutes.
TWA: 1800 mg/m³ 8 hours.
PEAK: 7200 mg/m³, 4 times per shift, 15 minutes.

propan-2-ol

TRGS 900 OEL (Germany, 4/2023).

TWA: 500 mg/m³ 8 hours.
PEAK: 1000 mg/m³ 15 minutes.
TWA: 200 ppm 8 hours.
PEAK: 400 ppm 15 minutes.

DFG MAC-values list (Germany, 7/2022).

TWA: 200 ppm 8 hours.
PEAK: 400 ppm, 4 times per shift, 15 minutes.
TWA: 500 mg/m³ 8 hours.
PEAK: 1000 mg/m³, 4 times per shift, 15 minutes.

ethanol

TRGS 900 OEL (Germany, 4/2023).

TWA: 380 mg/m³ 8 hours.
PEAK: 1520 mg/m³ 15 minutes.
TWA: 200 ppm 8 hours.
PEAK: 800 ppm 15 minutes.

DFG MAC-values list (Germany, 7/2022).

TWA: 200 ppm 8 hours.
PEAK: 800 ppm, 4 times per shift, 15 minutes.
TWA: 380 mg/m³ 8 hours.
PEAK: 1520 mg/m³, 4 times per shift, 15 minutes.

SECTION 8: Exposure controls/personal protection

(R)-p-mentha-1,8-diene	DFG MAC-values list (Germany, 7/2022). Absorbed through skin. Skin sensitizer. TWA: 5 ppm 8 hours. PEAK: 20 ppm, 4 times per shift, 15 minutes. TWA: 28 mg/m ³ 8 hours. PEAK: 112 mg/m ³ , 4 times per shift, 15 minutes. TRGS 900 OEL (Germany, 4/2023). Absorbed through skin. Skin sensitizer. PEAK: 20 ppm 15 minutes. PEAK: 112 mg/m ³ 15 minutes. TWA: 5 ppm 8 hours. TWA: 28 mg/m ³ 8 hours.
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Biological exposure indices

Product/ingredient name	Exposure indices
acetone	DFG BEI-values list (Germany, 7/2022) BEI: 50 mg/l, acetone [in urine]. Sampling time: end of exposure or end of shift. TRGS 903 - BEI Values (Germany, 2/2022) BEI: 80 mg/l, acetone [in urine]. Sampling time: end of exposure or end of shift.
propan-2-ol	DFG BEI-values list (Germany, 7/2022) BEI: 25 mg/l, acetone [in blood]. Sampling time: end of exposure or end of shift. BEI: 25 mg/l, acetone [in urine]. Sampling time: end of exposure or end of shift. TRGS 903 - BEI Values (Germany, 2/2022) BEI: 25 mg/l, acetone [in whole blood]. Sampling time: end of exposure or end of shift. BEI: 25 mg/l, acetone [in urine]. Sampling time: end of exposure or end of shift.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following:
European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
Naphtha (petroleum), hydrotreated light	DNEL	Long term Oral	149 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	149 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	0.41 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	1.9 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	178.57 mg/m ³	General population	Local
	DNEL	Long term Dermal	300 mg/kg	Workers	Systemic

SECTION 8: Exposure controls/personal protection

			bw/day		
	DNEL	Short term Inhalation	640 mg/m ³	General population	Local
	DNEL	Long term Inhalation	837.5 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	1066.67 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	1152 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	1286.4 mg/m ³	Workers	Systemic
acetone	DNEL	Long term Oral	62 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	62 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	186 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	200 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	1210 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	2420 mg/m ³	Workers	Local
propan-2-ol	DNEL	Long term Oral	26 mg/kg bw/day	General population	Systemic
	DNEL	Short term Oral	51 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	89 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	178 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	319 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	500 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	888 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	1000 mg/m ³	Workers	Systemic
(R)-p-mentha-1,8-diene	DNEL	Long term Oral	4.8 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	4.8 mg/kg bw/day	General population	Systemic

SECTION 8: Exposure controls/personal protection

	DNEL	Long term Dermal	9.5 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	16.6 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	66.7 mg/m ³	Workers	Systemic

PNECs

No PNECs available.

8.2 Exposure controls

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. Recommended : 1 - 4 hours (breakthrough time): nitrile rubber 4 - 8 hours (breakthrough time): Viton®/butyl rubber

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended : organic vapor (Type AX) and particulate filter

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: Gas.
Color	: Colorless.
Odor	: Characteristic.
Odor threshold	: Not available.
Melting point/freezing point	: Not applicable.
Initial boiling point and boiling range	: Not available.
Flammability	: Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge. Flammable in the presence of the following materials or conditions: heat.
Upper/lower flammability or explosive limits	: Lower: 1.5%
Flash point	: Closed cup: Not applicable.
Auto-ignition temperature	: Not applicable.
Decomposition temperature	: Not available.
pH	: Not applicable.
Viscosity	: Kinematic: Not applicable.
Solubility(ies)	: Not available.
Solubility in water	: Not available.
Miscible with water	: No.
Partition coefficient: n-octanol/water	: Not applicable.
Vapor pressure	: Not available.
Relative density	: Not applicable.
Density	: 0.699 g/cm ³
Vapor density	: Not available.
Explosive properties	: Explosive in the presence of the following materials or conditions: open flames, sparks and static discharge.
Oxidizing properties	: Not available.
<u>Particle characteristics</u>	
Median particle size	: Not applicable.
Fire point	: >200°C
SADT	: Not available.
SAPT	: Not available.
Heat of combustion	: 9.394 kJ/g
<u>Aerosol product</u>	
Type of aerosol	: Spray

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : Avoid all possible sources of ignition (spark or flame).

10.5 Incompatible materials : No specific data.

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
acetone	LD50 Oral	Rat	5800 mg/kg	-
propan-2-ol	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
(R)-p-mentha-1,8-diene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	4400 mg/kg	-

Conclusion/Summary : Not available.

Acute toxicity estimates

	ATE value
Not available.	

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
acetone	Eyes - Mild irritant	Human	-	186300 ppm	-
	Eyes - Mild irritant	Rabbit	-	10 uL	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Eyes - Severe irritant	Rabbit	-	20 mg	-
	Skin - Mild irritant	Rabbit	-	395 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
propan-2-ol	Eyes - Moderate irritant	Rabbit	-	10 mg	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Severe irritant	Rabbit	-	100 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-

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(R)-p-mentha-1,8-diene	Skin - Mild irritant	Rabbit	-	24 hours 10 %	-
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Conclusion/Summary : Not available.

Sensitization

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Naphtha (petroleum), hydrotreated light	Category 3	-	Narcotic effects
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	Category 3	-	Narcotic effects
acetone	Category 3	-	Narcotic effects
propan-2-ol	Category 3	-	Narcotic effects

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Product/ingredient name	Result
Naphtha (petroleum), hydrotreated light	ASPIRATION HAZARD - Category 1
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	ASPIRATION HAZARD - Category 1
(R)-p-mentha-1,8-diene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Skin contact : Causes skin irritation.

Ingestion : Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

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SECTION 11: Toxicological information

Inhalation	: Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Skin contact	: Adverse symptoms may include the following: irritation redness
Ingestion	: No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects	: Not available.
Potential delayed effects	: Not available.

Long term exposure

Potential immediate effects	: Not available.
Potential delayed effects	: Not available.

Potential chronic health effects

Not available.

Conclusion/Summary	: Not available.
General	: No known significant effects or critical hazards.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
acetone	Acute EC50 11493300 µg/l Fresh water	Algae - <i>Navicula seminulum</i>	96 hours
	Acute EC50 11727900 µg/l Fresh water	Algae - <i>Navicula seminulum</i>	96 hours
	Acute EC50 7200000 µg/l Fresh water	Algae - <i>Selenastrum sp.</i>	96 hours
	Acute EC50 20.565 mg/l Marine water	Algae - <i>Ulva pertusa</i>	96 hours
	Acute EC50 23.5 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 4.42589 ml/L Marine water	Crustaceans - <i>Acartia tonsa</i> - Copepodid	48 hours

SECTION 12: Ecological information

propan-2-ol	Acute LC50 7550000 µg/l Fresh water	Crustaceans - <i>Asellus aquaticus</i>	48 hours
	Acute LC50 8098000 µg/l Fresh water	Crustaceans - <i>Ceriodaphnia dubia</i> - Neonate	48 hours
	Acute LC50 11.26487 ml/L Fresh water	Crustaceans - <i>Gammarus pulex</i> - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 6000000 µg/l Fresh water	Crustaceans - <i>Gammarus pulex</i>	48 hours
	Acute LC50 7460000 µg/l Fresh water	Daphnia - <i>Daphnia cucullata</i>	48 hours
	Acute LC50 7810000 µg/l Fresh water	Daphnia - <i>Daphnia cucullata</i>	48 hours
	Acute LC50 10000 µg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 8800000 µg/l Fresh water	Daphnia - <i>Daphnia pulex</i>	48 hours
	Acute LC50 8000 ppm Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours
	Acute LC50 7280000 µg/l Fresh water	Fish - <i>Pimephales promelas</i>	96 hours
	Acute LC50 8120000 µg/l Fresh water	Fish - <i>Pimephales promelas</i>	96 hours
	Acute LC50 6210000 µg/l Fresh water	Fish - <i>Pimephales promelas</i>	96 hours
	Acute LC50 5600 ppm Fresh water	Fish - <i>Poecilia reticulata</i>	96 hours
	Chronic NOEC 0.5 ml/L Marine water	Algae - <i>Karenia brevis</i>	96 hours
	Chronic NOEC 100 µl/L Marine water	Algae - <i>Skeletonema costatum</i>	72 hours
	Chronic NOEC 100 µl/L Marine water	Algae - <i>Skeletonema costatum</i>	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - <i>Ulva pertusa</i>	96 hours
	Chronic NOEC 0.016 ml/L Fresh water	Crustaceans - <i>Daphniidae</i>	21 days
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - <i>Daphnia magna</i> - Neonate	21 days
	Chronic NOEC 5 µg/l Marine water	Fish - <i>Gasterosteus aculeatus</i> - Larvae	42 days
(R)-p-mentha-1,8-diene	Acute EC50 7550 mg/l Fresh water	Daphnia - <i>Daphnia magna</i> - Neonate	48 hours
	Acute LC50 1400000 µg/l Marine water	Crustaceans - <i>Crangon crangon</i>	48 hours
	Acute LC50 4200 mg/l Fresh water	Fish - <i>Rasbora heteromorpha</i>	96 hours
	Acute EC50 421 µg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute EC50 688 µg/l Fresh water	Fish - <i>Pimephales promelas</i> - Juvenile (Fledgling, Hatchling, Weanling)	96 hours

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

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SECTION 12: Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
Naphtha (petroleum), hydrotreated light	2.2 to 5.2	10 to 2500	High
acetone	-0.23	-	Low
carbon dioxide	0.83	-	Low
propan-2-ol	0.05	-	Low
(R)-p-mentha-1,8-diene	4.38	-	High

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

Not available.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

European waste catalogue (EWC)

Waste code	Waste designation
16 05 04*	gases in pressure containers (including halons) containing hazardous substances






Packaging

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Type of packaging	European waste catalogue (EWC)
15 01 04 15 01 02	metallic packaging plastic packaging

Special precautions : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	UN1950	UN1950	UN1950
14.2 UN proper shipping name	AEROSOLS	AEROSOLS	Aerosols, flammable
14.3 Transport hazard class(es)	2  	2.1  	2.1 
14.4 Packing group	-	-	-
14.5 Environmental hazards	Yes. Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane, Naphtha (petroleum), hydrotreated light	Yes. Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane, Naphtha (petroleum), hydrotreated light	Yes. The environmentally hazardous substance mark is not required.

Additional information

ADR/RID

: The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.

Limited quantity 1 L

Special provisions 190, 327, 625, 344

Tunnel code (D)

ADR Classification Code: 5F

IMDG

: The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

Emergency schedules F-D, S-U

Special provisions 63, 190, 277, 327, 344, 381, 959

IATA

: The environmentally hazardous substance mark may appear if required by other transportation regulations.

Quantity limitation Passenger and Cargo Aircraft: 75 kg. Packaging instructions: 203. Cargo Aircraft Only: 150 kg. Packaging instructions: 203. Limited Quantities - Passenger Aircraft: 30 kg. Packaging instructions: Y203.

Special provisions A145, A167, A802

14.6 Special precautions for user

: **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to IMO instruments

: Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

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SECTION 15: Regulatory information

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product/ingredient name	%	Designation [Usage]
isobutane	≤10	40
propane	≤5	40

Labeling : Not applicable.

Other EU regulations

**Industrial emissions
(integrated pollution
prevention and control) -
Air** : Listed

**Industrial emissions
(integrated pollution
prevention and control) -
Water** : Not listed

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Aerosol dispensers :

3



Extremely flammable

Detergents - Regulation (EC) No 907/2006

Annex VIIA - Labelling for Contents

Identification	Concentration
aliphatic hydrocarbons (R)-p-mentha-1,8-diene	30% and more less than 5%

VOC content : 97.44 %

VOC (g/L) : 681.4

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
P3a E2

National regulations

Ingredient name	Annex I Section A	Annex I Section B
propan-2-ol	Listed	-

Storage class (TRGS 510) : 2B

SECTION 15: Regulatory information

Hazardous incident ordinance

This product is controlled under the Germany Hazardous Incident Ordinance.

Danger criteria

Category	Reference number
P3a	1.2.3.1
E2	1.3.2

Hazard class for water : 2

Technical instruction on air quality control : TA-Luft Number 5.2.5: 47.6-96%
TA-Luft Class II - Number 5.2.7.1.1: 25-50%

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia	: All components are listed or exempted.
Canada	: All components are listed or exempted.
China	: All components are listed or exempted.
Eurasian Economic Union	: Russian Federation inventory : Not determined.
Japan	: Japan inventory (CSCL) : All components are listed or exempted. Japan inventory (ISHL) : Not determined.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: Not determined.
Thailand	: Not determined.
Turkey	: All components are listed or exempted.
United States	: Not determined.
Viet Nam	: Not determined.
15.2 Chemical Safety Assessment	: This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms

: ATE = Acute Toxicity Estimate
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
 DMEL = Derived Minimal Effect Level
 DNEL = Derived No Effect Level
 EUH statement = CLP-specific Hazard statement
 N/A = Not available
 PBT = Persistent, Bioaccumulative and Toxic
 PNEC = Predicted No Effect Concentration
 RRN = REACH Registration Number
 SGG = Segregation Group
 vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Aerosol 1, H222, H229 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H336 Aquatic Chronic 2, H411	On basis of test data Calculation method Calculation method Calculation method Calculation method

Full text of abbreviated H statements

H220 H222, H229 H225 H226 H280 H304 H315 H317 H319 H336 H400 H411 H412 EUH066	Extremely flammable gas. Extremely flammable aerosol. Pressurized container: may burst if heated. Highly flammable liquid and vapor. Flammable liquid and vapor. Contains gas under pressure; may explode if heated. May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause drowsiness or dizziness. Very toxic to aquatic life. Toxic to aquatic life with long lasting effects. Harmful to aquatic life with long lasting effects. Repeated exposure may cause skin dryness or cracking.
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Full text of classifications [CLP/GHS]

Aerosol 1 Aquatic Acute 1 Aquatic Chronic 2 Aquatic Chronic 3 Asp. Tox. 1 Eye Irrit. 2 Flam. Gas 1A Flam. Liq. 2 Flam. Liq. 3 Press. Gas (Comp.) Skin Irrit. 2 Skin Sens. 1B STOT SE 3	AEROSOLS - Category 1 AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 2 AQUATIC HAZARD (LONG-TERM) - Category 3 ASPIRATION HAZARD - Category 1 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 FLAMMABLE GASES - Category 1A FLAMMABLE LIQUIDS - Category 2 FLAMMABLE LIQUIDS - Category 3 GASES UNDER PRESSURE - Compressed gas SKIN CORROSION/IRRITATION - Category 2 SKIN SENSITIZATION - Category 1B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3
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SECTION 16: Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.