Safety Data Sheet dated 18/4/2024, version 3

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

1.1. Product identifier Mixture identification: Trade name: BRAKE CLEANER Trade code: 155 1.2. Relevant identified uses of the substance or mixture and uses advised against Recommended use: Spray brake cleaner. CONSUMER USE. Uses advised against: Do not use for purposes other than those listed. 1.3. Details of the supplier of the safety data sheet STREETBUZZ DISTRIBUTION GMBH Brachalmeth 4 Company: 66271 Kleinblittersdorf - Deutschland +49(0)6805 2063388 info@streetbuzz.com

1.4. Emergency telephone number

Streetbuzz Distribution GMBH, Brachalmeth 4, 66271 Kleinblittersdorf - Deutschland - +49(0)6805 2063388 info@streetbuzz.com (Mon-Fri 10-12 / 14-16)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)

Aerosols 1, H222, H229 Extremely flammable aerosol. Pressurized container: may burst if heated. Skin Irrit. 2, H315 Causes skin irritation.

STOT SE 3, H336 May cause drowsiness or dizziness.

Aquatic Chronic 2, H411 Toxic to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Danger Hazard statements: H222, H229 Extremely flammable aerosol. Pressurized container: may burst if heated. H315 Causes skin irritation. H336 May cause drowsiness or dizziness. H411 Toxic to aquatic life with long lasting effects. Precautionary statements: P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P211 Do not spray on an open flame or other ignition source. P251 Do not pierce or burn, even after use. P261 Avoid breathing spray. P271 Use only outdoors or in a well-ventilated area. P273 Avoid release to the environment. P302+P352 IF ON SKIN: Wash with plenty of water and soap. P312 Call a POISON CENTER/doctor if you feel unwell. P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F. **Special Provisions:** None Contains Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics propan-2-ol Special provisions according to Annex XVII of REACH and subsequent amendments: None Ingredients (Reg. EC n. 648/2004): >30% aliphatic hydrocarbons. <5% non-ionic surfactants. 2.3. Other hazards No PBT, vPvB or endocrine disruptor substances present in concentration >= 0.1% Other Hazards:

No other hazards

SECTION 3: Composition/information on ingredients

- 3.1. Substances
 - Not applicable
- 3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Numb	ber	Classification
70 - 80 %	Hydrocarbons, C7, n- alkanes, isoalkanes, cyclics	CAS: EC: REACH No.:	64742-49-0 927-510-4 01- 2119475515- 33	 2.6/2 Flam. Liq. 2 H225 3.10/1 Asp. Tox. 1 H304 3.2/2 Skin Irrit. 2 H315 3.8/3 STOT SE 3 H336 4.1/C2 Aquatic Chronic 2 H411
6.5 - 7.5 %	ethanol; ethyl alcohol	Index number: CAS: EC:	603-002-00-5 64-17-5 200-578-6	 2.6/2 Flam. Liq. 2 H225 3.3/2 Eye Irrit. 2 H319 Specific Concentration Limits: C >= 50%: Eye Irrit. 2 H319

		REACH No.:	01- 2119457610- 43	
2 - 7 %	butane	Index number:	601-004-00-0	2.2/1A Flam. Gas 1A H220
		CAS:	106-97-8	🛠 2.5 Press. Gas H280
		EC:	203-448-7	
		REACH No.:	01- 2119474691- 32	
1 - 3 %	carbon dioxide	CAS:	124-38-9	
		EC:	204-696-9	2.5/L Press Gas (Liq.) H280
1 - 3 %	propane	Index number:	601-003-00-5	2.2/1A Flam. Gas 1A H220
		CAS:	74-98-6	🛠 2.5 Press. Gas H280
		EC:	200-827-9	
		REACH No.:	01- 2119486944- 21	
1 - 3 %	propan-2-ol; isopropyl alcohol; isopropanol	Index number:	603-117-00-0	2.6/2 Flam. Liq. 2 H225
		CAS:	67-63-0	👽 3.3/2 Eye Irrit. 2 H319
		EC:	200-661-7	3.8/3 STOT SE 3 H336
		REACH No.:	01- 2119457558- 25	,

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an opthalmologist immediately.

Protect uninjured eye.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

No data available for the mixture. See section 11 for symptoms and effects of the substances.

HYDROCARBONS C7, n-alkanes, iso-alkanes, cyclics

Acute effects: headache, lightheadedness, dizziness, skin irritation.

It can be fatal if swallowed and enters the respiratory tract.

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

Treat symptomatically.

HYDROCARBONS C7, N-ALCANS, ISO-ALCANS, CYCLIC: Keep under observation after exposure to the substance to check for pneumonia or pulmonary edema. Do not administer drugs from the adrenaline-ephedrine group.

SECTION 5: Firefighting measures

- 5.1. Extinguishing media
 - Suitable extinguishing media:

Water spray (fog), dry chemical product, carbon dioxide (CO2), alcohol resistant foam. Extinguishing media which must not be used for safety reasons: Water jets.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

- Remove all sources of ignition.
- Remove persons to safety.

See protective measures under point 7 and 8.

6.2. Environmental precautions

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

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

- 6.3. Methods and material for containment and cleaning up
- Wash with plenty of water.
- 6.4. Reference to other sections See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

Contamined clothing should be changed before entering eating areas.

Do not eat or drink while working.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.

Keep away from food, drink and feed.

Incompatible materials:

See subsection 10.5

Instructions as regards storage premises:

Cool and adequately ventilated.

7.3. Specific end use(s) See section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics - CAS: 64742-49-0

- OEL Type: VLEP - TWA(8h): 2085 mg/m3, 500 ppm - Notes: FRANCE

- OEL Type: WEL - TWA(8h): 500 ppm - Notes: UNITED KINGDOM_EH40/2005 Workplace exposure limits (Third edition,published 2018)

- OEL Type: OEL - TWA(8h): 2085 mg/m3, 500 ppm - Notes: EUROPE

- OEL Type: TLV-ACGIH - TWA: 400 ppm - STEL(15 min): 500 ppm - Notes: ACGIH 2019

ethanol; ethyl alcohol - CAS: 64-17-5

- OEL Type: VLEP - STEL: 1000 ppm - Notes: Italy

- OEL Type: VLEP - TWA: 1900 mg/m3, 1000 ppm - STEL: 9500 mg/m3, 5000 ppm - Notes: France

- OEL Type: WEL - TWA: 1000 ppm - Notes: United Kingdom

- OEL Type: TLV-ACGIH - TWA: 1880 mg/m3, 1000 ppm - STEL: 1884 mg/m3

- OEL Type: ACGIH - STEL: 1000 ppm

butane - CAS: 106-97-8

- OEL Type: NIOSH REL - TWA(10h): 1900 mg/m3, 800 ppm - Notes: United States, 10/2016

- OEL Type: OSHA PEL - TWA(8h): 1900 mg/m3, 800 ppm - Notes: United States, 3/1989

- OEL Type: MAK - TWA: 1600 mg/m3, 800 ppm - STEL: 3800 mg/m3, 1600 ppm - Notes: Austria

- OEL Type: VLEP - STEL(15 min): 2370 mg/m3, 980 ppm - Notes: Belgium

- OEL Type: TLV - TWA: 1200 mg/m3, 500 ppm - STEL: 2400 mg/m3, 1000 ppm - Notes: Denmark

- OEL Type: HTP - TWA: 1900 mg/m3, 800 ppm - STEL(15 min): 2400 mg/m3, 100 ppm - Notes:

Finland

- OEL Type: VLE - TWA: 1900 mg/m3, 800 ppm - Notes: France

- OEL Type: MAK - TWA: 2400 mg/m3, 1000 ppm - STEL: 9600 mg/m3, 4000 ppm - Notes: Germany

- OEL Type: VLA - TWA: 1935 mg/m3, 800 ppm - Notes: Spain

- OEL Type: WEL - TWA: 1450 mg/m3, 600 ppm - STEL: 1810 mg/m3, 750 ppm - Notes: United Kingdom

- OEL Type: ACGIH - STEL: 1000 ppm - Notes: (ACGIH, 2017)

CARBON DIOXIDE - CAS: 124-38-9

- OEL Type: MAK - TWA: 9000 mg/m3 - STEL: 18000 mg/m3 - Notes: Austria

- OEL Type: TWA - TWA(8h): 5000 ppm - STEL(15 min): 10000 ppm - Notes: Austria

- OEL Type: TWA - TWA(8h): 9131 mg/m3, 5000 ppm - STEL(15 min): 54784 mg/m3, 30000 ppm - Notes: Belgium

- OEL Type: VLE - TWA(8h): 9000 mg/m3, 5000 ppm - Notes: Italy

- OEL Type: VME - TWA(8h): 9000 mg/m3, 5000 ppm - Notes: France

- OEL Type: AGW - TWA(8h): 9100 mg/m3, 5000 ppm - Notes: Germany

- OEL Type: VLA-ED - TWA(8h): 9150 mg/m3, 5000 ppm - Notes: Spain

- OEL Type: TWA - TWA(8h): 9000 mg/m3, 5000 ppm - Notes: Denmark

- OEL Type: TWA - TWA(8h): 9150 mg/m3, 5000 ppm - STEL(15 min): 27400 mg/m3, 15000 ppm - Notes: United Kingdom

- OEL Type: MAC TWA - TWA(8h): 9000 mg/m3 - Notes: Netherlands

- OEL Type: TWA - TWA(8h): 9000 mg/m3 - Notes: Bulgaria

- OEL Type: TWA - TWA(8h): 9000 mg/m3, 5000 ppm - Notes: Cyprus

- OEL Type: TWA - TWA(8h): 9000 mg/m3, 5000 ppm - Notes: Estonia

- OEL Type: OEL - TWA(8h): 9000 mg/m3, 5000 ppm - STEL(15 min): 54000 mg/m3, 30000 ppm - Notes: Greece

- OEL Type: TWA - TWA(8h): 9000 mg/m3, 5000 ppm - Notes: Latvia

- OEL Type: VLE - TWA(8h): 9000 mg/m3, 5000 ppm - Notes: Switzerland

- OEL Type: TWA - TWA(8h): 9000 mg/m3, 5000 ppm - STEL(15 min): 45000 mg/m3, 25000 ppm - Notes: Czech Republic

- OEL Type: TWA - TWA(8h): 9100 mg/m3, 5000 ppm - Notes: Finland

- OEL Type: VLE - TWA(8h): 9000 mg/m3 - Notes: Hungary

- OEL Type: OEL - TWA(8h): 9000 mg/m3, 5000 ppm - STEL(15 min): 27000 mg/m3, 15000 ppm - Notes: Ireland

- OEL Type: TWA - TWA(8h): 9000 mg/m3, 5000 ppm - Notes: Lithuania

- OEL Type: TWA - TWA(8h): 9000 mg/m3, 5000 ppm - Notes: Malta

- OEL Type: TWA - TWA(8h): 9000 mg/m3, 5000 ppm - Notes: Norway

- OEL Type: TWA - TWA(8h): 9000 mg/m3 - STEL(15 min): 27000 mg/m3 - Notes: Poland

- OEL Type: TWA - TWA(8h): 9000 mg/m3, 5000 ppm - STEL(15 min): 18000 mg/m3, 30000 ppm - Notes: Portugal

- OEL Type: EU - TWA(8h): 9000 mg/m3, 5000 ppm

- OEL Type: ACGIH - TWA(8h): 5000 ppm - STEL: 30000 ppm

propane - CAS: 74-98-6

- OEL Type: MAK - TWA: 1800 mg/m3, 1000 ppm - STEL: 3600 mg/m3, 2000 ppm - Notes: Austria

- OEL Type: VLEP - TWA: 1000 ppm - Notes: BELGIUM

- OEL Type: VEA - TWA: 1800 mg/m3, 1000 ppm - Notes: CANADA

- OEL Type: TLV - TWA: 1800 mg/m3, 1000 ppm - STEL: 3600 mg/m3, 2000 ppm - Notes: Denmark - OEL Type: AGW - TWA: 1800 mg/m3, 1000 ppm - STEL: 7200 mg/m3, 4000 ppm - Notes:

Germany

- OEL Type: NDS - TWA: 1800 mg/m3 - Notes: POLAND

- OEL Type: VLA - TWA: 1000 ppm - Notes: SPAIN

- OEL Type: OSHA - TWA: 1800 mg/m3, 1000 ppm

- OEL Type: HTP - TWA: 1500 mg/m3, 800 ppm - STEL: 2000 mg/m3, 1100 ppm - Notes: Finland

- OEL Type: MAK - TWA: 1800 mg/m3, 1000 ppm - STEL: 7200 mg/m3, 4000 ppm - Notes: SWITZERLAND

- OEL Type: VLEP - TWA: 1400 mg/m3, 778 ppm - STEL: 1800 mg/m3, 1000 ppm - Notes: ROMANIA propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0

- OEL Type: VLEP - TWA: 500 mg/m3, 200 ppm - STEL: 1000 mg/m3, 400 ppm - Notes: Belgium

- OEL Type: TLV-ACGIH TWA(8h): 492 mg/m3, 200 ppm STEL: 983 mg/m3, 400 ppm
- OEL Type: VLEP STEL: 980 mg/m3, 400 ppm Notes: France

- OEL Type: WEL - TWA: 400 ppm - STEL: 500 ppm - Notes: United Kingdom

- OEL Type: VLEP - TWA: 200 ppm - STEL: 400 ppm - Notes: Italy

- OEL Type: ACGIH - TWA(8h): 200 ppm - STEL: 400 ppm

DNEL Exposure Limit Values

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics - CAS: 64742-49-0

Worker Industry: 300 mg/kg/day - Consumer: 149 mg/kg/day - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Industry: 2085 mg/m3 - Consumer: 477 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Consumer: 149 mg/kg/day - Exposure: Human Oral - Frequency: Long Term, systemic effects

ethanol; ethyl alcohol - CAS: 64-17-5

Worker Professional: 950 mg/m3 - Consumer: 114 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Professional: 1900 mg/m3 - Consumer: 950 mg/m3 - Exposure: Human Inhalation -

Frequency: Short Term, local effects

Worker Professional: 343 mg/kg bw/d - Consumer: 206 mg/kg bw/d - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Consumer: 87 mg/kg bw/d - Exposure: Human Oral - Frequency: Long Term, systemic effects propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0

Worker Professional: 500 mg/m3 - Consumer: 89 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Professional: 888 mg/kg/day - Consumer: 319 mg/kg/day - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Consumer: 26 mg/kg/day - Exposure: Human Oral - Frequency: Long Term, systemic effects

Exposure: Human Inhalation - Frequency: Short Term, systemic effects

Exposure: Human Dermal - Frequency: Short Term, systemic effects

PNEC Exposure Limit Values

ethanol; ethyl alcohol - CAS: 64-17-5

Target: Fresh Water - Value: 0.96 mg/l

Target: Marine water - Value: 0.79 mg/l

Target: Freshwater sediments - Value: 3.6 mg/kg

Target: Microorganisms in sewage treatments - Value: 580 mg/l

Target: Soil (agricultural) - Value: 0.63 mg/kg

Target: Periodic release - Value: 2.75 mg/l

Target: Oral (Secondary poisoning) - Value: 0.72 mg/kg

propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0

Target: Fresh Water - Value: 140.9 mg/l

Target: Marine water - Value: 140.9 mg/l

Target: Freshwater sediments - Value: 552 mg/kg

Target: Marine water sediments - Value: 552 mg/kg

Target: Periodic release - Value: 140.9 mg/l

Target: Microorganisms in sewage treatments - Value: 2251 mg/l

Target: Oral (Secondary poisoning) - Value: 160 mg/kg

Target: Soil - Value: 28 mg/kg

8.2. Exposure controls

Eye protection:

Under normal conditions of use no special precautions are required.

In case of involuntary spread, wear safety goggles with side shields (EN 166).

Protection for skin:

Under normal conditions of use no special precautions are required.

Avoid skin contact.

Protection for hands:

Under normal conditions of use no special precautions are required.

If a prolonged contact with the product is expected, it's recommended to protect your hands with work gloves resistant to penetration (ref. Standard EN 374). Final choice of the gloves material must also evaluate the process of using the product and any other products derived from them. It also recalled that the latex gloves could cause sensitization effects.

Respiratory protection:

If you exceed the workplace exposure limits or cause fogging, the use of a respiratory protection device is necessary.

Thermal Hazards:

None

Environmental exposure controls:

See section 7 and 13.

Appropriate engineering controls:

Ensure adequate ventilation of the premises.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes
Physical state:	Liquid		under pressure
Colour:	Colourless		
Odour:	characteristic		
Melting point/freezing point:	not available		Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics: < -20 °C
Boiling point or initial boiling point and boiling range:	not available		Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics: > 83 °C
Flammability:	Flammable		
Lower and upper explosion limit:	Not applicable		
Flash point:	<23 ° C		
Auto-ignition temperature:	Not applicable		
Decomposition temperature:	Not applicable		

pH:	Not applicable		mixture non-soluble in water
Kinematic viscosity:	Not Relevant		aerosol
Solubility in water:	not soluble		
Solubility in oil:	soluble		
Partition coefficient n- octanol/water (log value):	Not applicable		
Vapour pressure:	7 bar		
Density and/or relative density:	0.63 g/ml (20°C)		liquid
Relative vapour density:	Not applicable		
	Particle chara	acteristics:	
Particle size:	Not applicable		

9.2. Other information

No other relevant information

SECTION 10: Stability and reactivity

10.1. Reactivity

In normal condition of use and storage (see section 7) dangerous reactions are not expected.

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

In normal condition of use and storage dangerous reactions are not expected . Avoid contact with incompatible substances.

HYDROCARBONS C7, N-ALCANS, ISO-ALCANS, CYCLES: they can react dangerously with oxidizing materials.

10.4. Conditions to avoid

Avoid overheating, electrostatic discharge and all sources of ignition.

HYDROCARBONS C7, N-ALCANS, ISO-ALCANS, CYCLES: May form an explosive mixture with air.

The heat causes pressure increase with danger of bursting and subsequent explosion.

10.5. Incompatible materials

Acids.

Oxidizing agents.

10.6. Hazardous decomposition products

In case of fire or decomposition may spread gas and vapors potentially harmful for health as CO2, carbon mono-oxide and other irritating fumes.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 Toxicological information of the product:

BRAKE CLEANER

a) acute toxicity

Not classified

Based on available data, the classification criteria are not met

b) skin corrosion/irritation

The product is classified: Skin Irrit. 2 H315

c) serious eye damage/irritation

Not classified

Based on available data, the classification criteria are not met

d) respiratory or skin sensitisation

Not classified

Based on available data, the classification criteria are not met

e) germ cell mutagenicity

Not classified Based on available data, the classification criteria are not met f) carcinogenicity Not classified Based on available data, the classification criteria are not met g) reproductive toxicity Not classified Based on available data, the classification criteria are not met h) STOT-single exposure The product is classified: STOT SE 3 H336 i) STOT-repeated exposure Not classified Based on available data, the classification criteria are not met j) aspiration hazard Not classified Based on available data, the classification criteria are not met Toxicological information of the main substances found in the product: Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics - CAS: 64742-49-0 a) acute toxicity: Test: LD50 - Route: Oral - Species: Rat > 5840 mg/kg bw - Notes: Gastric probe Test: LC50 - Route: Inhalation - Species: Rat > 23.3 mg/l - Duration: 4h - Source: OECD 403 Test: LD50 - Route: Skin - Species: Rat > 4 mg/kg bw - Duration: 24h Test: Respiratory Tract Irritant Positive b) skin corrosion/irritation: Test: Skin Irritant Positive d) respiratory or skin sensitisation: Negative e) germ cell mutagenicity: Negative g) reproductive toxicity: Negative ethanol; ethyl alcohol - CAS: 64-17-5 a) acute toxicity: Test: LC50 - Route: Inhalation Vapour - Species: Rat > 20 mg/l - Duration: 6h - Notes: OECD 403 (literature value) Test: LD50 - Route: Oral - Species: Rat > 5000 mg/kg - Source: OECD 401 - Notes: Symptoms: Central nervous system depression, coma. (literature value) Test: LD50 - Route: Skin - Species: Rat > 5000 mg/kg b) skin corrosion/irritation: Test: Skin Irritant - Route: Skin - Species: Rabbit Negative - Notes: OECD 404 (literature value) c) serious eye damage/irritation: Test: Eye Irritant - Route: Eyes - Species: Rabbit Positive - Notes: OECD 405 (literature value) d) respiratory or skin sensitisation: Species: Mouse Negative - Notes: OECD 429 (literature value). Mouse lymph nodes e) germ cell mutagenicity: Test: In vitro mutation test Negative Test: In vivo mutation test Negative f) carcinogenicity: Negative g) reproductive toxicity: Test: NOAEL - Species: Mouse = 13.800 mg/kg bw/day - Duration: 126 days - Source: OECD 416 -Notes: Two-generation reproductive toxicity study; drinking water. Test: TERA - Route: Oral - Species: Rat = 5200 mg/kg bw/day

Test: TERA - Route: Inhalation - Species: Rat = 39 mg/l - Source: OECD 414 butane - CAS: 106-97-8 a) acute toxicity: Test: LC50 - Route: Inhalation - Species: Rat = 1355 mg/l - Duration: 15 minutes - Notes: High concentrations of vapors can cause: headache, nausea, dizziness. Test: LC50 - Route: Inhalation - Species: Rat = 570000 ppm - Duration: 15 minutes Test: LC50 - Route: Inhalation - Species: Rat = 1237 mg/l - Duration: 120 minutes b) skin corrosion/irritation: Based on available data, the classification criteria are not met c) serious eye damage/irritation: Based on available data, the classification criteria are not met d) respiratory or skin sensitisation: Based on available data, the classification criteria are not met e) germ cell mutagenicity: Based on available data, the classification criteria are not met f) carcinogenicity: Based on available data, the classification criteria are not met q) reproductive toxicity: Based on available data, the classification criteria are not met CARBON DIOXIDE - CAS: 124-38-9 a) acute toxicity: Test: Acute toxicity No known effect. b) skin corrosion/irritation: No known effect. c) serious eye damage/irritation: No known effect. d) respiratory or skin sensitisation: No known effect. e) germ cell mutagenicity: No known effect. f) carcinogenicity: No known effect. g) reproductive toxicity: No known effect. h) STOT-single exposure: No known effect. i) STOT-repeated exposure: No known effect. j) aspiration hazard: Not applicable. propane - CAS: 74-98-6 a) acute toxicity: Test: LC50 - Route: Inhalation - Species: Rat = 1443 mg/l - Duration: 15 minutes - Notes: High concentrations of vapors can cause: migraine, nausea, dizziness. b) skin corrosion/irritation: Notes: Compressed gas causes cold burns. Repeated and prolonged contact can cause skin redness, irritation and contact dermatitis due to a degreasing effect. - Based on available data, the classification criteria are not met c) serious eye damage/irritation: Notes: Contact with eyes may cause temporary redness and irritation. - Based on available data, the classification criteria are not met

d) respiratory or skin sensitisation:

Based on available data, the classification criteria are not met

e) germ cell mutagenicity: Based on available data, the classification criteria are not met f) carcinogenicity: Based on available data, the classification criteria are not met propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0 a) acute toxicity: Test: LC50 - Route: Inhalation Vapour - Species: Rat > 10000 mg/l - Duration: 6h - Source: OECD 403 Test: LD50 - Route: Oral - Species: Rat > 5000 mg/kg - Source: OECD 401 Test: LD50 - Route: Skin - Species: Rat > 5000 mg/kg - Source: OECD 402 b) skin corrosion/irritation: Test: Skin Irritant - Route: Skin - Species: Rabbit Negative c) serious eye damage/irritation: Test: Eye Irritant - Route: Eyes - Species: Rabbit Positive - Source: OECD 405 d) respiratory or skin sensitisation: Test: Buehler test - Species: Guinea pig Negative - Source: OECD 406 e) germ cell mutagenicity: Test: In vitro mutation test Negative Test: In vivo mutation test Negative f) carcinogenicity: Test: NOAEL - Route: Inhalation Vapour - Species: Rat = 5000 mg/m3 - Duration: 2yrs - Source: OECD 451 - Notes: Showed no carcinogenic effects in animal experiments g) reproductive toxicity: Test: NOAEL - Route: Oral - Species: Rat Negative - Duration: 10 weeks - Source: OECD 416 Test: NOAEL - Route: Oral - Species: Rat female Negative - Source: OECD 414 h) STOT-single exposure: Route: Inhalation - Notes: It may cause drowsiness or dizziness. i) STOT-repeated exposure: Test: NOEC - Route: Inhalation Vapour - Species: Rat = 5000 mg/l - Duration: 90 days - Source: **OECD 413** 11.2. Information on other hazards Endocrine disrupting properties: No endocrine disruptor substances present in concentration >= 0.1%**SECTION 12: Ecological information** 12.1. Toxicity Adopt good working practices, so that the product is not released into the environment. **BRAKE CLEANER** The product is classified: Aquatic Chronic 2 - H411

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics - CAS: 64742-49-0

a) Aquatic acute toxicity:

Endpoint: LL50 - Species: Fish (Oncorhynchus mykiss) > 13.4 mg/l - Duration h: 96 - Notes: OECD 203

Endpoint: EC50 - Species: Daphnia magna = 3 mg/l - Duration h: 48 - Notes: OECD 202 Endpoint: ErL50 - Species: Algae (Pseudokirchneriella subcapitata) > 10 mg/l - Duration h: 72 - Notes: OECD 201

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Fish (Oncorhynchus mykiss) = 1.534 mg/l - Duration h: 672 - Notes: QSAR Petrotox

ethanol; ethyl alcohol - CAS: 64-17-5

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish (Pimephales promelas) > 100 mg/l - Duration h: 96 - Notes: US EPA F03-05 Endpoint: EC50 - Species: Ceriodaphnia dubia > 100 mg/l - Duration h: 48 Endpoint: EC50 - Species: Algae (Chlorella vulgaris) > 100 mg/l - Duration h: 72 - Notes: OECD 201 (literature values) c) Bacteria toxicity: Species: Pseudomonas putida = 6500 mg/l - Duration h: 16 butane - CAS: 106-97-8 a) Aquatic acute toxicity: Endpoint: LC50 - Species: Fish = 24.11 mg/l - Duration h: 96 - Notes: QSAR Endpoint: EC50 - Species: Daphnia = 14.22 mg/l - Notes: QSAR Endpoint: EC50 - Species: Algae = 7.71 mg/l - Duration h: 96 - Notes: QSAR propane - CAS: 74-98-6 a) Aquatic acute toxicity: Endpoint: LC50 - Species: Fish = 49.9 mg/l - Duration h: 96 Endpoint: EC50 - Species: Daphnia = 27.1 mg/l - Duration h: 48 Endpoint: EC50 - Species: Algae = 11.9 mg/l - Duration h: 72 propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0 a) Aquatic acute toxicity: Endpoint: LC50 - Species: Fish (Pimephales promelas) > 100 mg/l - Duration h: 96 - Notes: OECD 203 Endpoint: EC50 - Species: Ceriodaphnia dubia > 100 mg/l - Duration h: 48 - Notes: OECD 202 Endpoint: EC50 - Species: Algae (Chlorella vulgaris) > 100 mg/l - Notes: OECD 201 12.2. Persistence and degradability Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics - CAS: 64742-49-0 Biodegradability: Persistence - Test: OECD 301F - Duration h: 28 days - %: 98 Test: OECD 301F - Duration h: 10 days - %: 83 ethanol; ethyl alcohol - CAS: 64-17-5 Biodegradability: Readily biodegradable - Test: OECD 301D - Duration h: 5d - %: 70 butane - CAS: 106-97-8 Biodegradability: Readily biodegradable. - Duration h: 3,46 days - %: 50 - Notes: QSAR propane - CAS: 74-98-6 Biodegradability: Readily biodegradable. - Duration h: 16 days - %: 100 - Notes: QSAR propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0 Biodegradability: Readily biodegradable - Duration h: 5d - Notes: Aerobic, Directive 84/449/EEC (literature value). The surfactants contained in this product meet the biodegradability criteria laid down in Regulation (EC) No. 648/2004 on detergents. 12.3. Bioaccumulative potential ethanol; ethyl alcohol - CAS: 64-17-5 Not bioaccumulative - Test: Log Kow 4 butane - CAS: 106-97-8 Low bioaccumulation potential - Test: Log Pow 2.89 Test: Log Kow - Notes: <=3 propane - CAS: 74-98-6 Low bioaccumulation potential - Test: Log Kow 2.36 Low bioaccumulation potential - Test: BCF - Bioconcentrantion factor 1.56 propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0 Bioconcentration is not expected - Test: Log Pow - Notes: <4 12.4. Mobility in soil ethanol; ethyl alcohol - CAS: 64-17-5 The product is poorly absorbed in the soil and sediments. butane - CAS: 106-97-8

Notes: The product is very volatile. There is no indication of biological accumulation potential. propane - CAS: 74-98-6

Notes: The product is very volatile. There is no indication of biological accumulation potential.

propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0

Notes: Very mobile in soils. No soil adsorption is expected.

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

- 12.6. Endocrine disrupting propertiesNo endocrine disruptor substances present in concentration >= 0.1%
- 12.7. Other adverse effects

None

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information



14.1. UN number or ID number	
ADR-UN Number:	1950
IATA-UN Number:	1950
IMDG-UN Number:	1950
14.2. UN proper shipping name	
ADR-Shipping Name:	AEROSOLS, flammable
IATA-Shipping Name:	AEROSOLS, flammable
IMDG-Shipping Name:	AEROSOLS, flammable
14.3. Transport hazard class(es)	
ADR-Class:	2
ADR - Hazard identification number	er: -
IATA-Class:	2
IATA-Label:	2.1
IMDG-Class:	2
14.4. Packing group	
ADR-Packing Group:	-
IATA-Packing group:	-
IMDG-Packing group:	-
14.5. Environmental hazards	
ADR-Enviromental Pollutant:	Yes
IMDG-Marine pollutant:	Marine Pollutant
IMDG-EmS:	F-D , S-U
14.6. Special precautions for user	
ADR-Subsidiary hazards:	See SP63
ADR-S.P.:	190 327 344 625
ADR-Transport category (Tunnel r	estriction code): 2 (D)
IATA-Passenger Aircraft:	203

IATA-Subsidiary hazards:	See SP63
IATA-Cargo Aircraft:	203
IATA-S.P.:	A145 A167 A802
IATA-ERG:	10L
IMDG-Subsidiary hazards:	See SP63
IMDG-Stowage and handling:	SW1 SW22
IMDG-Segregation:	SG69

14.7. Maritime transport in bulk according to IMO instruments Not applicable

SECTION 15: Regulatory information

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

Dir. 98/24/EC (Risks related to chemical agents at work) Dir. 2000/39/EC (Occupational exposure limit values) Regulation (EC) n. 1907/2006 (REACH) Regulation (EC) n. 1272/2008 (CLP) Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013 Regulation (EU) n. 2020/878 Regulation (EU) n. 286/2011 (ATP 2 CLP) Regulation (EU) n. 618/2012 (ATP 3 CLP) Regulation (EU) n. 487/2013 (ATP 4 CLP) Regulation (EU) n. 944/2013 (ATP 5 CLP) Regulation (EU) n. 605/2014 (ATP 6 CLP) Regulation (EU) n. 2015/1221 (ATP 7 CLP) Regulation (EU) n. 2016/918 (ATP 8 CLP) Regulation (EU) n. 2016/1179 (ATP 9 CLP) Regulation (EU) n. 2017/776 (ATP 10 CLP) Regulation (EU) n. 2018/669 (ATP 11 CLP) Regulation (EU) n. 2018/1480 (ATP 13 CLP) Regulation (EU) n. 2019/521 (ATP 12 CLP) Regulation (EU) n. 2020/217 (ATP 14 CLP) Regulation (EU) n. 2020/1182 (ATP 15 CLP) Regulation (EU) n. 2021/643 (ATP 16 CLP) Regulation (EU) n. 2021/849 (ATP 17 CLP) Regulation (EU) n. 2022/692 (ATP 18 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

Restriction 3

Restriction 40

Restrictions related to the substances contained:

Restriction 75

Where applicable, refer to the following regulatory provisions :

Directive 2012/18/EU (Seveso III)

Regulation (EC) nr 648/2004 (detergents).

Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III): Seveso III category according to Annex 1, part 1 Product belongs to category: P3a, E2

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Full text of phrases referred to in Section 3:

H225 Highly flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.

H319 Causes serious eye irritation.

H220 Extremely flammable gas.

H280 Contains gas under pressure; may explode if heated.

Hazard class and hazard category	Code	Description
Flam. Gas 1A	2.2/1A	Flammable gas, Category 1A
Aerosols 1	2.3/1	Aerosol, Category 1
Press. Gas	2.5	Gases under pressure
Press Gas (Liq.)	2.5/L	Gases under pressure (Liquefied gas)
Flam. Liq. 2	2.6/2	Flammable liquid, Category 2
Asp. Tox. 1	3.10/1	Aspiration hazard, Category 1
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Irrit. 2	3.3/2	Eye irritation, Category 2
STOT SE 3	3.8/3	Specific target organ toxicity - single exposure, Category 3
Aquatic Chronic 2	4.1/C2	Chronic (long term) aquatic hazard, category 2

This safety data sheet has been completely updated in compliance to Regulation 2020/878. Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Aerosols 1, H222, H229	Calculation method
Skin Irrit. 2, H315	Calculation method
STOT SE 3, H336	Calculation method
Aquatic Chronic 2, H411	Calculation method

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ECHA website: https://echa.europa.eu/home

IFA GESTIS website: https://limitvalue.ifa.dguv.de

SAX'S DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

ADR:European Agreement concerning the International Carriage of Dangerous
Goods by Road.ATE:Acute Toxicity Estimate

ATEmix:	Acute toxicity Estimate (Mixtures)
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.