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Reviewed on:	BRAKE CLEANER 500	Version: 1.0

1. Section 1. Identification of the substance/mixture and of the company/undertaking:

- 1.1. Product identifier : **BRAKE CLEANER 500 – R 34216 (spray)**
- 1.2. Relevant identified uses of the substance or mixture and uses advised against: Cleaning and degreasing agent
- 1.3. Details of the supplier of the safety data sheet
Identification of manufacturer/Supplier:
RETECH, s.r.o.
Vackova 1541/4
150 00 Praha-5 Stodůlky
Telephone/Fax: +420 327 596 128, +420 327 596 428
Information: info@retech.cz
- 1.4. Emergency telephone number:
RETECH Suchdol 212, Suchdol u Kutné Hory
Tel.+420 327 596 128 (7.30-16.00 hour)
Toxicology information number, Na bojišti 1, 128 08 PRAHA 2
Tel. +420 224 919 293, +420 224 915 402 (24 hours a day)

2. Section 2. Hazard identification:

- The product is labeled due to the calculation procedure of the “General Classification guideline for preparations of the EU” in the latest valid version.
The classification is in line with current EC lists, It is expanded, however, by information from technical literature and by information furnished by supplier companies.
- 2.1. Classification of the substance or mixture:
Classification according to Regulation (EC) No 1272/2008:
Flam. Aerosol 1 H222 Extremely flammable aerosol.
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.
- Classification according to Directive 67/548/EEC or Directive 1999/45/EC:
F+ Extremely flammable R12 Extremely flammable
Xi-Irritant R38 Irritating to skin.
N-Dangerous for the environment R51/53 Toxic to aquatic organisms, may cause long-term effects in aquatic environment.
R67 Vaporous may cause drowsiness and dizziness.

2.2. Label elements:

Labelling according to Regulation (EC) No 1272/2008:

GHS02



DANGER

GHS07



WARNING

GHS09



H222 Extremely flammable aerosol.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.

Labelling according to Directive 1999/45/EC:

F+



Extremely flammable

Xi



Irritant

N



Dangerous for the environment

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Special labeling of certain preparations:

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition.- No smoking. Keep out of reach of children.

2.3. Other hazards:

Results of PBT and vPvB assessment:

PBT: Not applicable

vPvB: Not applicable

Buildup of explosive mixtures possible without sufficient ventilation.

3. Section 3. Composition/information on ingredients:

3.2. Mixtures:

Description: The active ingredient in propellants

Dangerous components:

CAS: 64742-49-0 EINECS: 265-151-9 Reg.nr.: 01-2119475514-35-xxxx	Naphtha (petroleum); Hydrotreated light (contains less than 0.1% benzene) F R11; Xi R38; N51/53; Xn R65; R67 GHS02 Flam. Liq. 2, H225; GHS08 Asp. Tox. 1, H304; GHS09 Aquatic Chronic 2, H411; GHS07 Skin Irrit. 2, H315; STOT SE 3, H336	50-100%
CAS: 75-28-3 EINECS: 200-857-2	Isobutan F+ R12 GHS02 Flam. Gas 1, H220; GHS04 Press. Gas, H280	2.5-<10%
CAS: 124-38-9 EINECS: 204-696-9	Carbon dioxide GHS04 Press. Gas, H280	2.5-<10%
CAS: 74-98-6 EINECS: 200-827-9	Propane F+ R12 GHS02 Flam. Gas 1, H220; GHS04 Press. Gas, H280	≤2.5%

Additional information: For the wording of the listed risk phrases refer to section 16.

Ingredients according to detergents guideline 648/2004/EC: Aliphatic hydrocarbons ≥30%

4. Section 4. First aid measures:

Description of first aid measures:

After inhalation: Supply fresh air; rest, if necessary seek medical advice.

After skin contact: Remove soaked clothing; Immediately wash with water and soap and rinse thoroughly.

After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.

After swallowing: Rinse mouth; Do not induce vomiting; Consult a physician.

Most important symptoms and effects, both acute and delayed: In case of unconsciousness place patient stable in side position for transportation.

Indication of any immediate medical attention and special treatment needed: No further relevant information available.

5. Section 5. Fire fighting measures:

5.1. Extinguishing media:

Suitable extinguishing agents: CO₂, extinguishing powder or alcohol resistant foam.

For safety reasons unsuitable extinguishing agents: Water jet.

5.2. Special hazards arising from the substance or mixture:

Can form explosive gas-air mixtures.

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5.3.	Advice for firefighters:	<p>Formation of toxic gases is possible during heating or in case of fire.</p> <p>Wear protective equipment/clothing when fighting fires.</p> <p>Aerosols may explode when overheated.</p> <p>Cool the container with water.</p>
6. Section 6. Accidental release measures:		
6.1.	Personal precautions, protective equipment and emergency procedures:	Wear protective equipment see Section 8.2. Ensure adequate ventilation. Keep unprotected person away. Keep away from ignition sources.
6.2.	Environmental precautions:	Do not allow product to reach sewage system, surface or ground water. Inform respective authorities in case of seepage into water course or sewage system.
6.3.	Methods and material for containment and cleaning up:	Ensure adequate ventilation. Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose of contaminated material as waste according to Section 13.
6.4.	Reference to other sections:	See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.
7. Section 7. Handling and storage:		
7.1.	Information for safe handling:	Ensure good ventilation/exhaustion at the workplace.
	Information about protection against explosions and fires:	Beware: Container is pressurized. Keep away from direct sun exposure and temperatures over 50°C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects. Keep ignition sources away - Do not smoke. Protect against electrostatic charges.
7.2.	Conditions for safe handling, including any incompatibilities: Requirements to be met by storerooms and containers:	Store in cool location. Observe official regulations on storing packaging with pressurized containers.
	Information about storage in one common storage facility:	Observe official regulations on storing packaging with pressurized containers.
	Further information about storage conditions:	Store in cool, dry conditions. Protect from heat and direct sunlight.
7.3.	Specific end use(s):	No further relevant information available.
8. Section 8. Exposure controls and personal protection:		
8.1	Control parameters:	Components with limit values that require monitoring at the workplace:
		124-38-9 Carbon dioxide
	WEL	Short-term value: 27400 mg/m ³ , 15000 ppm Long-term value: 9150 mg/m ³ , 5000 ppm
		74-98-6 Propane
	WEL	Short-term value: 3600 mg/cm ³ , 2000 ppm Long-term value: 1800 mg/m ³ , 1000 ppm
		64742-49-0 Naphtha (petroleum) – Long-term value: 315 ppm
8.2	Exposure controls:	
	Eye protection:	Tightly safety glasses.
	Breathing equipment:	Use suitable respiratory protective device in case of insufficient ventilation. In case of brief exposure or low pollution use respiratory filter device-filter AX/P2.

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<p>Protection of hands:</p> <p>8.3. General protective and hygienic measures:</p>	<p>In case of intensive or longer exposure use self-contained respiratory protective device.</p> <p>Selection of glove material on consideration of the penetration times, rates of diffusion and the degradation</p> <p>Material of gloves: Nitrile rubber, NBR</p> <p>Recommended thickness of the material: ≥ 0.7 mm</p> <p>Penetration time of glove material ≥ 240 min</p> <p>The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.</p> <p>Protective working clothes.</p> <p>Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands during breaks and at the end of the work. Do not inhale gases/fumes/aerosols.</p>
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9. Section 9. Physical and chemical properties:	
Appearance:	
form:	Aerosol
colour:	Colourless
Odour threshold:	Characteristic
Value pH:	Not determined
Melting point/freezing point:	Not determined
Melting point/freezing point:	Not determined
Initial boiling point/boiling range:	Not determined
Flash point:	Not determined
Evaporation rate:	Not determined
Flammability (solid,gas):	>200°C
Explosive properties:	Product is not explosive. However, formation of explosive air/steam mixtures is possible.
Upper/lower flammability or explosive limits:	
Explosion limits: lower (% Vol):	Not determined
upper (% Vol):	Not determined
Vapour pressure (at 20°C):	4 Bar
Vapour density (at 20 °C):	Not determined
Relative density:	0.706 g/cm ³
Solubility in/miscibility with	
- water	Not miscible or difficult to mix
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity:	Not determined
Oxidative properties:	Not determined
9.2. Other information:	
Organic solvents:	96.6%
VOC:	681.6 g/l

10. Section 10. Stability and reactivity:	
10.1. Reactivity:	No further relevant information available.
10.2. Chemical stability:	No further relevant information available.
10.3. Possibility of hazardous reactions:	No dangerous reactions known.
10.4. Conditions to avoid:	There are known no conditions to avoid.
10.5. Incompatible materials:	There are known no incompatible materials.
10.6. Hazardous products of decomposition:	In case of fire CO, aldehyde may be possible.

11. Section 11. Toxicological

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<p>information:</p> <p>11.1 Information on toxicological effects:</p> <p>Acute toxicity:</p> <p>64742-49-0 Naphtha (petroleum), hydrotreated light</p> <p>Oral LD50 4300-6000 mg/kg (rat)</p> <p>Dermal LD50 >3000 mg/kg (rab)</p> <p>Inhalative LC50/4h >60 mg/l (rat)</p> <p>Irritation: on the skin: Irritant to skin and mucous membranes.</p> <p>on the eye: No irritating effect.</p> <p>Corrosivity: Not corrosive.</p> <p>Sensitization: No sensitizing effect known.</p> <p>Repeated dose toxicity: No further relevant information available.</p> <p>Carcinogenicity: No further relevant information available.</p> <p>Mutagenicity: No further relevant information available.</p> <p>Toxicity for reproduction: No further relevant information available.</p> <p>Other information: Vapours have narcotic effect.</p>		
<p>12. Section 12. Ecological information:</p> <p>12.1. Toxicity:</p> <p>Ecotoxicological effects:</p> <p>Acquatic toxicity:</p> <p>64742-49-0 Naphtha (petroleum), hydrotreated light</p> <p>LC50 (48h) 35-37 mg/l (Fish)</p> <p>Water hazard class 2 (Self-assessment): hazardous for water.</p> <p>Do not allow product to reach ground water, water course or sewage system.</p> <p>Danger to drinking water if even small quantities leak into the ground.</p> <p>Also poisonous for fish and plankton in water bodies.</p> <p>Toxic for aquatic organisms.</p> <p>Toxic to fish.</p> <p>12.2. Persistence and degradability: No further relevant information available.</p> <p>12.3. Bioaccumulative potential: No further relevant information available.</p> <p>12.4. Mobility in soil: No further relevant information available.</p> <p>12.5. Results of PBT and vPvB assessment:</p> <p>PBT: Not applicable</p> <p>vPvB: Not applicable</p> <p>12.6. Other adverse effects: No further relevant information available.</p>		
<p>13. Section 13. Disposal considerations:</p> <p>13.1 Waste treatment methods:</p> <p>Product: Dispose in safe manner in accordance with local/national regulation.</p> <p>Uncleaned packagings: Disposal must be made according to official regulations.</p>		
<p>14. Section 14. Transport information:</p> <p>14.1. Land transport:</p> <p>ADR/RID-GGVS: 2</p> <p>Number/Letter: 5F</p> <p>Danger code (Kemler): 23</p> <p>Number UN: 1950</p> <p>Special marking: Symbol (fish and tree)</p> <p>Remarks: "Limited quantities", LQ2</p> <p>Transport category: 2</p> <p>Tunnel restriction code: D</p> <p>Description of goods: Aerosols</p> <p>14.2. Maritime transport:</p> <p>IMDG-class: 2.1</p>		

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Page: -
 Number UN: 1950
 Packaging group: -
 EMS-group: F-D,S-U
 Marine pollutant: YES, Symbol (fish and tree)
 Proper shipping name: Aerosols
 14.3. Air transport:
 ICAO / IATA -class: 2.1
 UN/ID number: 1950
 Packaging group: -
 Proper shipping name: Aerosols, flammable
 UN "Model Regulation": UN1950; AEROSOLS; 2.1
 Special precautions for users - Waring: Gases
 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable

15. Section 15. Regulatory information:

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

Labelling according to law line:

Danger of determining components and mark to labelling:

64742-49-0 Naphtha (petroleum), hydrotreated light , 74-98-6/106-97-8 Propane/Butane

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after burn. Do not spray on a naked flame or any incandescent material.

Labelling hazardousness:



F+ - Extremely flammable



Xi- Irritant



N- Dangerous for the environment

Numbers and word reading associated hazard R-sentences :

R 12 Extremely flammable.

R 38 Irritating to skin.

R 51/53 Toxic to aquatic organisms, may cause long-term effects in aquatic environment.

R 67 Vapours may cause drowsiness and dizziness.

Numbers and word reading associated security S-sentences:

S 2 Keep out of reach of children.

S 16 Keep away from sources of ignition – No smoking.

S 23 Do not breathe vapours/spray.

S 37 Wear suitable gloves.

S 46 If swallowed, seek medical advice immediately and show this container or label.

S 51 Use only in well-ventilated areas.

S 56 Dispose of this material and its container at hazardous or special waste collection point.

On the packaging there is not included info in accordance with European Regulation No 1999/45/EC (chapter 2.5.).

Regulation (EC) No 648/2004 Contains: Aliphatic, hydrocarbons $\geq 30\%$

Density: 0.706 g/cm³

VOC: 681.6 g/l

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Used legislation:

European Regulation (EC) No 1907/2006 – REACH.
Commission Regulation (EU) No 453/2010.
European Regulation No 67/548EEC and 1999/45/EC.
Commission Regulation (EC) No 1272/2006 – CLP.
Commission Regulation (EC) No 790/2009.
Regulation (EC) No 648/2004 (detergents).

15.2. Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16. Section 16. Other information:

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relative R+H phrases:

R 11 Highly flammable.
R 12 Extremely flammable.
R 38 Irritating to skin.
R 51/53 Toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment.
R 65 Harmful: May cause lung damage if swallowed.
R 67 Vapours may cause drowsiness and dizziness.
H220 Extremely flammable gas.
H225 Highly flammable liquid and vapour.
H280 Contains gas under pressure; may explode if heated.
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

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
MAL-Code: Måleteknisk Arbejdshygiejnisk Luftbehov (Regulation for the labeling concerning inhalation hazards, Denmark)
WEL- Workplace exposure limits
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

***Compared to the last version the data has been changed.**