




Date of issue: 15.07.2011	Trade name:	Page: 1/7
Reviewed on:	<b>CERAMIC</b>	Version: 1.0

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

- 1.1. Product identifier : **CERAMIC - 05.0004**
- 1.2. Relevant identified uses of the substance or mixture and uses advised against: High-temperature lubricant
- 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](mailto: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.  
STOT SE 3 H336 May cause drowsiness or dizziness.  
Aquatic Chronic 3 H412 Harmful 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.  
R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R67 Vaporous may cause drowsiness and dizziness.
- 2.2. Label elements:  
Labelling according to Regulation (EC) No 1272/2008:  
GHS02 GHS07  
   
DANGER WARNING
- H222 Extremely flammable aerosol.  
H336 May cause drowsiness or dizziness.  
H412 Harmful to aquatic life with long lasting effects.
- Labelling according to Directive 1999/45/EC:  
F+  
  
Extremely flammable
- R 12 Extremely flammable  
R 52/53 Harmful to aquatic organisms may cause long-term adverse effects in the aquatic environment.  
R 67 Vaporous may cause drowsiness and dizziness.

Date of issue: 15.07.2011	Trade name:	Page: 2/7
Reviewed on:	<b>CERAMIC</b>	Version: 1.0

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: 106-97-8 EINECS: 203-448-7 Reg.nr.: 01-2119474691-32	Butane (containing <0,1% butadiene (203-450-8)) F+ R12 GHS02 Flam. Gas 1, H220; GHS04 Press. Gas, H280	25-<50%
CAS: 109-66-0 EINECS: 203-692-4 Reg.nr.: 01-2119459286-30	Pentane F+ R12; N R51/53; Xn R65; R66 R67 GHS02 Flam. Liq. 2, H225; GHS08 Asp. Tox. 1, H304; GHS09 Aquatic Chronic 2, H411; STOT SE 3, H336; EUH066	10-<25%
CAS: 74-98-6 EINECS: 200-827-9 Reg.nr.:01-2119486944-21	Propane F+ R12 GHS02 Flam. Gas 1, H220; GHS04 Press. Gas, H280	10-<25%

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

**4. Section 4. First aid measures:**

4.1. Description of first aid measures:

After inhalation: Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

After skin contact: Instantly remove any clothing soiled by the product, 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: Do not induce vomiting, rinse mouth with water and drink plenty of water. Seek for medical advice immediately. Do not give water if the person is unconscious.

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: Carbon dioxide (CO2), fire-extinguishing powder, water haze or alcohol resistant foam.

For safety reasons unsuitable extinguishing agents: Water with full jet.

5.2. Special hazards arising from the substance or mixture:

Information not available.

5.3. Advice for firefighters:

Wear protective equipment/clothing when fighting fires.

Aerosols may explode when overheated.

Cool the container with water.

Date of issue: 15.07.2011	Trade name:	Page: 3/7
Reviewed on:	<b>CERAMIC</b>	Version: 1.0

**6. Section 6. Accidental release measures:**

- 6.1. Personal precautions, protective equipment and emergency procedures:  
Wear protective equipment see Section 8.2. Keep unprotected person away. Ensure adequate ventilation, keep away from ignition sources.
- 6.2. Environmental precautions:  
Do not allow to enter drainage system, surface or ground water.  
Inform respective authorities in case product reaches water 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:  
Information about protection against explosions and fires:  
Ensure good ventilation/exhaustion at the workplace.  
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:  
106-97-8 Butane (containing < 0.1% butadiene (203-450-8))  
WEL Short-term value: 1810 mg/m<sup>3</sup>, 750 ppm  
Long-term value: 1450 mg/m<sup>3</sup>, 600 ppm  
Carc (if more than 0.1% of buta-1.3-diene)  
74-98-6 Propane  
WEL Short-term value: 3600 mg/cm<sup>3</sup>, 2000 ppm  
Long-term value: 1800 mg/m<sup>3</sup>, 1000 ppm  
109-66-0 Pentane  
WEL Long-term value: 3000 mg/cm<sup>3</sup>, 1000 ppm  
Additional information: The lists that were valid during the compilation were used as basis.
- 8.2. Exposure controls:  
Eye protection: Tightly sealed goggles.  
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. In case of intensive or longer exposure use self-contained respiratory protective device.  
Protection of hands: Solvent resistant gloves.

Date of issue: 15.07.2011	Trade name:	Page: 4/7
Reviewed on:	<b>CERAMIC</b>	Version: 1.0

8.3.	Protection of skin: General protective and hygienic measures:	Selection of glove material on consideration of the penetration times, rates of diffusion and the degradation Material of gloves: Nitrile rubber, NBR The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed. Protective working clothing. Keep away from foodstuffs, beverages and food. Immediately remove all soiled and contaminated clothing. Wash hands during breaks and at the end of the work.
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<b>9.</b>	<b>Section 9. Physical and chemical properties:</b>	
9.1.	Information on basic physical and chemical properties:	
	Appearance:	
	form:	Aerosol
	colour:	Grey
	Odour threshold:	Characteristic
	Value pH:	Not determined
	Melting point/freezing point:	Not determined
	Initial boiling point/boiling range:	-44°C
	Flash point:	-97°C
	Evaporation rate:	Not determined
	Flammability (solid,gas):	Not applicable
	Ignition temperature:	285°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.):	1.4
	upper (% Vol.):	10.9
	Vapour pressure (at 20°C):	4 Bar
	Vapour density (at 20 °C):	Not determined
	Relative density:	0.661 g/cm <sup>3</sup>
	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:	59.3%
	Solids content:	0.2%
	VOC:	495.8 g/l

<b>10.</b>	<b>Section 10. Stability and reactivity:</b>	
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:	No further relevant information available.
10.6.	Hazardous products of decomposition:	No dangerous decomposition products known.

<b>11.</b>	<b>Section 11. Toxicological information:</b>	
11.1.	Acute toxicity:	
	109-66-0 Pentane	
	Oral LD50	>16000 mg/kg (rat)

Date of issue: 15.07.2011	Trade name:	Page: 5/7
Reviewed on:	<b>CERAMIC</b>	Version: 1.0

Dermal	LD50	>2500 mg/kg (rat) >5000 mg/kg (rabbit)
Inhalative	LC50/4h	>100 mg/l (rat)
106-97-8 Butane		
Inhalative	LC50/4h	658 mg/l (rat)
Irritation: on the skin: No irritant effect.		
on the eye: No irritant effect.		
Corrosivity: Not corrosive.		
Sensitization: No sensitizing effect known.		
Repeated dose toxicity: No further relevant information available.		
Carcinogenicity: No further relevant information available.		
Mutagenicity: No further relevant information available.		
Toxicity for reproduction: No further relevant information available.		
Other information: No data.		

**12. Section 12. Ecological information:**

- 12.1. Toxicity:  
Ecotoxicological effects:  
Aquatic toxicity:  
109-66-0 Pentane  
EC50(48h) >5mg/l (daphnia magna)  
Water hazard class 2 (German Regulation). (Self-assessment): Hazardous for water. Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground.  
Harmful to fish.  
Harmful to aquatic organisms.
- 12.2. Persistence and degradability: No further relevant information available.
- 12.3. Bioaccumulative potential: No further relevant information available.
- 12.4. Mobility in soil: No further relevant information available.
- 12.5. Results of PBT and vPvB assessment:  
PBT: Not applicable  
vPvB: Not applicable
- 12.6. Other adverse effects: No further relevant information available.

**13. Section 13. Disposal considerations:**

- 13.1. Waste treatment methods:  
Product: Must not be disposed together with household garbage. Do not allow product to reach sewage system.  
Uncleaned packagings: Disposal must be made according to official regulations.

**14. Section 14. Transport information:**

- 14.1. Land transport:  
ADR/RID-GGVSE class: 2 5F Gases  
Danger code (Kemler): -  
Packaging group: -  
Number UN: 1950  
Hazard label: 2.1  
Description of goods: Aerosols  
Remarks: "Limited quantities", LQ2  
Transport category: 2  
Tunnel restriction code: D
- 14.2. Maritime transport:  
IMDG-class: 2.1  
Number UN: 1950  
Packaging group: -  
EMS-group: F-D,S-U

Date of issue: 15.07.2011	Trade name:	Page: 6/7
Reviewed on:	<b>CERAMIC</b>	Version: 1.0

14.3. Marine pollutant: No  
Proper shipping name: Aerosols  
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:  
The product has been labeled in accordance with EC Directives / relevant national laws.  
Danger of determining components and mark to labelling:  
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

Numbers and word reading associated hazard R-sentences :

R 12 Extremely flammable.

R 52/53 Harmful to aquatic organisms may cause long-term adverse effects in the aquatic environment.

R 67 Vaporous 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 24 Avoid contact with skin .

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.).

Density: 0,661g/cm<sup>3</sup>

VOC: 495,8 g/l

National regulations:

Danish MAL Code 2-1

Date of issue: 15.07.2011	Trade name:	Page: 7/7
Reviewed on:	<b>CERAMIC</b>	Version: 1.0

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 12 Extremely flammable.  
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 66 Repeated exposure may cause skin dryness or cracking.  
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.  
H336 May cause drowsiness or dizziness.  
H411 Toxic to aquatic life with long lasting effects.  
EUH066 Repeated exposure may cause skin dryness or cracking.

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.**