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**Bizol Chain+ L53**

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

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

Lubricant

**1.3. Details of the supplier of the safety data sheet**

|               |                      |                                |
|---------------|----------------------|--------------------------------|
| Company name: | BIZOL Germany GmbH   |                                |
| Street:       | Martin-Buber-Str. 12 |                                |
| Place:        | D-14163 Berlin       |                                |
| Telephone:    | +49 (30) 804 869-0   | Telefax: +49 (30) 804 869-2860 |
| e-mail:       | support@bizol.de     |                                |
| Internet:     | www.bizol.com        |                                |

**1.4. Emergency telephone number:**

Germany: +49 (30) 804 869-0 (08.00-17.00, Mo-Fr)  
In England and Wales: NHS Direct: 0845 4647 or 111 In Scotland: NHS 24 -  
08454 24 24 24 In Republic of Ireland: 01 809 2166

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GB CLP Regulation**

Hazard categories:  
Flammable gases: Flam. Gas 1  
Hazardous to the aquatic environment: Aquatic Chronic 3  
Hazard Statements:  
Extremely flammable aerosol.  
Pressurised container: May burst if heated.  
Harmful to aquatic life with long lasting effects.

**2.2. Label elements****GB CLP Regulation****Signal word:** Danger**Pictograms:****Hazard statements**

|      |  |
|------|--|
| H222 | Extremely flammable aerosol.                       |
| H229 | Pressurised container: May burst if heated.        |
| H412 | Harmful to aquatic life with long lasting effects. |

**Precautionary statements**

|           |  |
|-----------|--|
| P102      | Keep out of reach of children.   |
| P260      | Do not breathe Aerosol dispensers and lighters.  |
| P210      | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P251      | Do not pierce or burn, even after use.   |
| P211      | Do not spray on an open flame or other ignition source.  |
| P410+P412 | Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.                   |
| P501      | Dispose of waste according to applicable legislation.  |

**2.3. Other hazards**

No further relevant information available.

**SECTION 3: Composition/information on ingredients**

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### 3.2. Mixtures

#### Chemical characterization

Blend of the following materials with non-hazardous additives.

#### Hazardous components

| CAS No   | Chemical name   |              |                  | Quantity      |
|----------|---|--------------|------------------|---------------|
|          | EC No   | Index No     | REACH No         |               |
|          | Classification (GB CLP Regulation)  |              |                  |               |
| 74-98-6  | propane   |              |                  | 12,5 - < 20 % |
|          | 200-827-9   | 601-003-00-5 | 01-2119486944-21 |               |
|          | Flam. Gas 1, Compressed gas; H220 H280  |              |                  |               |
| 106-97-8 | butane  |              |                  | 5 - < 10 %    |
|          | 203-448-7   | 601-004-00-0 | 01-2119474691-32 |               |
|          | Flam. Gas 1, Compressed gas; H220 H280  |              |                  |               |
| 75-28-5  | isobutane   |              |                  | 5 - < 10 %    |
|          | 200-857-2   | 601-004-00-0 | 01-2119485395-27 |               |
|          | Flam. Gas 1, Compressed gas; H220 H280  |              |                  |               |
| 109-66-0 | pentane   |              |                  | 5 - < 10 %    |
|          | 203-692-4   | 601-006-00-1 | 01-2119459286-30 |               |
|          | Flam. Liq. 1, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H224 H336 H304 H411 EUH066 |              |                  |               |

Full text of H and EUH statements: see section 16.

#### Specific Conc. Limits, M-factors and ATE

| CAS No   | EC No     | Chemical name                            | Quantity   |
|----------|-----------|--|------------|
|          |           | Specific Conc. Limits, M-factors and ATE |            |
| 109-66-0 | 203-692-4 | pentane                                  | 5 - < 10 % |
|          |           | inhalation: LC50 = 364 mg/l (vapours)    |            |

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

When in doubt or if symptoms are observed, get medical advice. If unconscious but breathing normally, place in recovery position and seek medical advice. Remove contaminated, saturated clothing immediately.

#### After inhalation

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

#### After contact with skin

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

#### After contact with eyes

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

#### After ingestion

If swallowed, rinse mouth with water (only if the person is conscious). Let water be drunken in little sips (dilution effect). Call a physician immediately. Do NOT induce vomiting.

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

When in doubt or if symptoms are observed, get medical advice.

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

No information available.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

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**Suitable extinguishing media**

alcohol resistant foam, Extinguishing powder, Carbon dioxide (CO<sub>2</sub>).

**Unsuitable extinguishing media**

Full water jet.

**5.2. Special hazards arising from the substance or mixture**

Hazardous decomposition products: Carbon monoxide Carbon dioxide (CO<sub>2</sub>). Do not inhale explosion and combustion gases.

**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.

**Additional information**

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Do not allow to enter into soil/subsoil.

**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

**General advice**

Protective measures: see section 7 + 8.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Clean contaminated articles and floor according to the environmental legislation.

**6.3. Methods and material for containment and cleaning up**

**Other information**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

**6.4. Reference to other sections**

Protective measures: see section 7 + 8.

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

**Advice on safe handling**

Use personal protection equipment. Do not eat, drink or smoke when using this product. Provide fresh air. Handle and open container with care. Conditions to avoid: generation/formation of aerosols.

**Advice on protection against fire and explosion**

Avoid formation of flammable and explosive vapour concentrations in the air and exceeding the exposure limit values. Only use the material in places where open light, fire and other flammable sources can be kept away. Vapours of flammable solvents can accumulate in the gas phase of closed container, especially during heat treatment. Therefore keep away from fire and sources of ignition. Provide earthing of containers, equipment, pumps and ventilation facilities. Use non-sparking tools. Recommendation: Wear anti-static footwear and clothing

**Advice on general occupational hygiene**

When using do not eat, drink, smoke, sniff.

**7.2. Conditions for safe storage, including any incompatibilities**

**Requirements for storage rooms and vessels**

Protect against: Frost. Keep away from heat. Protect from direct sunlight. Keep container tightly closed in a cool, well-ventilated place.

**7.3. Specific end use(s)**

Observe technical data sheet.

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

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### Exposure limits (EH40)

| CAS No   | Substance | ppm | mg/m <sup>3</sup> | fibres/ml | Category      | Origin |
|----------|-----------|-----|-------------------|-----------|---------------|--------|
| 106-97-8 | Butane    | 600 | 1450              |           | TWA (8 h)     | WEL    |
|          |           | 750 | 1810              |           | STEL (15 min) | WEL    |
| 109-66-0 | Pentane   | 600 | 1800              |           | TWA (8 h)     | WEL    |

#### Additional advice on limit values

- a no restriction
- b End of exposure or end of shift
- c at long-term exposure:
- d before next shift

Y: A risk of reproductive effects needs not to be feared if the occupational exposure limit value (AGW) and the biological limit value (BGW) is kept

Z: A risk of reproductive effects cannot to be excluded if the occupational exposure limit value (AGW) and the biological limit value (BGW) is kept

blood (B)

Urine (U)

### 8.2. Exposure controls

#### Appropriate engineering controls

See section 7. No additional measures necessary.

#### Individual protection measures, such as personal protective equipment

##### Eye/face protection

Eye glasses with side protection.

##### Hand protection

Wear suitable gloves. Recommended glove articles: EN ISO 374. Suitable material: NBR (Nitrile rubber).

Breakthrough time: > 120 min (Thickness of the glove material: 0.4 mm). Breakthrough times and swelling properties of the material must be taken into consideration. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

##### Skin protection

Protective clothing.

##### Respiratory protection

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

Suitable respiratory protection apparatus: Filtering Half-face mask (EN 149), e.g. FFA P / Full-/half-/quarter-face masks (EN 136/140) + Combination filtering device, e.g. A P.

##### Environmental exposure controls

Do not allow to enter into surface water or drains.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|   |                              |
|---|------------------------------|
| Physical state:   | Aerosol                      |
| Colour:   | light yellow                 |
| Odour:  | characteristic               |
| Melting point/freezing point:                             | not determined               |
| Boiling point or initial boiling point and boiling range: | not applicable               |
| Flammability  |                              |
| Solid/liquid:   | Extremely flammable aerosol. |
| Lower explosion limits:                                   | 1,7 vol. %                   |
| Upper explosion limits:                                   | 10,9 vol. %                  |
| Flash point:  | < 0 °C                       |
| Auto-ignition temperature:                                | 240 °C                       |
| Decomposition temperature:                                | No data available            |

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|  |                        |
|--|------------------------|
| pH-Value:                              | not determined         |
| Viscosity / kinematic:                 | not determined         |
| Water solubility:                      | Immiscible             |
| Partition coefficient n-octanol/water: | not determined         |
| Vapour pressure:                       | 8300 hPa               |
| (at 20 °C)                             |                        |
| Density:                               | 0,72 g/cm <sup>3</sup> |
| Relative vapour density:               | not determined         |
| Particle characteristics:              | not applicable         |

### 9.2. Other information

#### Explosive properties

The product is: not explosive. In use may form flammable/explosive vapour-air mixture.

#### Other safety characteristics

|                      |                |
|----------------------|----------------|
| Pour point:          | not applicable |
| Viscosity / dynamic: | not determined |
| Flow time:           | not determined |

No further relevant information available.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No information available.

### 10.2. Chemical stability

No information available.

### 10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

### 10.4. Conditions to avoid

Heat.

### 10.5. Incompatible materials

No information available.

### 10.6. Hazardous decomposition products

No information available.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in GB CLP Regulation

#### Acute toxicity

Based on available data, the classification criteria are not met.

#### ATEmix calculated

ATE (inhalation gas) 6646,5 ppm

| CAS No   | Chemical name           |               |         |        |        |
|----------|-------------------------|---------------|---------|--------|--------|
|          | Exposure route          | Dose          | Species | Source | Method |
| 109-66-0 | pentane                 |               |         |        |        |
|          | inhalation (4 h) vapour | LC50 364 mg/l | Rat     | GESTIS |        |

#### Irritation and corrosivity

Based on available data, the classification criteria are not met.

#### Sensitising effects

Based on available data, the classification criteria are not met.

#### Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

#### STOT-single exposure

Based on available data, the classification criteria are not met.

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### STOT-repeated exposure

Based on available data, the classification criteria are not met.

### Aspiration hazard

Based on available data, the classification criteria are not met.

### 11.2. Information on other hazards

#### Other information

Keeping to the general worker's protection rules and the industrial hygienics, there is no risk in handling this product through the personnel. Prolonged or repeated skin contact may cause removal of natural fat from the skin resulting in dermatitis (skin inflammation).

## SECTION 12: Ecological information

### 12.1. Toxicity

There are no data available on the mixture itself.

| CAS No   | Chemical name            |                |           |               |        |        |
|----------|--------------------------|----------------|-----------|---------------|--------|--------|
|          | Aquatic toxicity         | Dose           | [h]   [d] | Species       | Source | Method |
| 109-66-0 | pentane                  |                |           |               |        |        |
|          | Acute crustacea toxicity | EC50 9,74 mg/l | 48 h      | Daphnia magna | IUCLID |        |

### 12.2. Persistence and degradability

There are no data available on the mixture itself.

### 12.3. Bioaccumulative potential

There are no data available on the mixture itself.

#### Partition coefficient n-octanol/water

| CAS No   | Chemical name | Log Pow |
|----------|---------------|---------|
| 74-98-6  | propane       | 2,36    |
| 106-97-8 | butane        | 2,89    |
| 75-28-5  | isobutane     | 2,8     |
| 109-66-0 | pentane       | 3,39    |

### 12.4. Mobility in soil

No data available

### 12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

### 12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

### 12.7. Other adverse effects

No data available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Disposal recommendations

Do not allow to enter into surface water or drains. This material and its container must be disposed of in a safe way. Waste disposal according to EC directives 75/442/EEC and 91/689/EEC in the corresponding versions, covering waste and dangerous waste.

#### List of Wastes Code - residues/unused products

200113 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately collected fractions (except 15 01); Solvents; hazardous waste

#### List of Wastes Code - contaminated packaging

150104 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); metallic packaging

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### Contaminated packaging

Non-contaminated packages may be recycled. Consult the appropriate local waste disposal expert about waste disposal.

## SECTION 14: Transport information

### Land transport (ADR/RID)

**14.1. UN number or ID number:** UN 1950  
**14.2. UN proper shipping name:** AEROSOLS  
**14.3. Transport hazard class(es):** 2  
**14.4. Packing group:** -  
 Hazard label: 2.1



Classification code: 5F  
 Special Provisions: 190 327 344 625  
 Limited quantity: 1 L  
 Excepted quantity: E0  
 Transport category: 2  
 Tunnel restriction code: D

### Marine transport (IMDG)

**14.1. UN number or ID number:** UN 1950  
**14.2. UN proper shipping name:** AEROSOLS  
**14.3. Transport hazard class(es):** 2.1  
**14.4. Packing group:** -  
 Hazard label: 2.1



Marine pollutant: NO  
 Special Provisions: 63, 190, 277, 327, 344, 959  
 Limited quantity: 1000 mL  
 Excepted quantity: E0  
 EmS: F-D, S-U

### Air transport (ICAO-TI/IATA-DGR)

**14.1. UN number or ID number:** UN 1950  
**14.2. UN proper shipping name:** AEROSOLS, flammable  
**14.3. Transport hazard class(es):** 2.1  
**14.4. Packing group:** -  
 Hazard label: 2.1



Special Provisions: A145 A167 A802  
 Limited quantity Passenger: 30 kg G  
 Passenger LQ: Y203  
 Excepted quantity: E0  
 IATA-packing instructions - Passenger: 203  
 IATA-max. quantity - Passenger: 75 kg  
 IATA-packing instructions - Cargo: 203  
 IATA-max. quantity - Cargo: 150 kg

### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

### 14.6. Special precautions for user

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No data available

**14.7. Maritime transport in bulk according to IMO instruments**

No data available

**SECTION 15: Regulatory information**

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

**EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 28, Entry 40

2010/75/EU (VOC): 40 % (288 g/l)

**National regulatory information**

Water hazard class (D): 1 - slightly hazardous to water

**15.2. Chemical safety assessment**

Chemical safety assessments for substances in this mixture were not carried out.

**SECTION 16: Other information**

**Changes**

This data sheet contains changes from the previous version in section(s): 1,2,3,7,9,11,13,14,15.

**Abbreviations and acronyms**

ADR: Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement concernant le transport international ferroviaire des marchandises dangereuses (Regulations concerning the International Carriage of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

CAS: Chemical Abstracts Service (a division of the American Chemical Society)

DNEL/DMEL: Derived No-Effect Level / Derived Minimal Effect Level

PNEC: Predicted No Effect Concentration

WEL (UK): Workplace Exposure Limits

TWA (EC): Time-Weighted Average

STEL (EC): Short Term Exposure Limit

ATE: Acute Toxicity Estimate

LD50: Lethal Dose, 50% (median lethal dose)

LC50: Lethal Concentration, 50% (median lethal concentration)

EC50: half maximal Effective Concentration

ErC50: EC50 in terms of reduction of growth rate

AwSV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen

**Relevant H and EUH statements (number and full text)**

|        |   |
|--------|---|
| H220   | Extremely flammable gas.                              |
| H222   | Extremely flammable aerosol.                          |
| H224   | Extremely flammable liquid and vapour.                |
| H229   | Pressurised container: May burst if heated.           |
| 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.      |
| H412   | Harmful to aquatic life with long lasting effects.    |
| EUH066 | Repeated exposure may cause skin dryness or cracking. |

**Further Information**

Safety Data Sheet according to COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006

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The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*