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

1.1. Product identifier
Bizol Radiator Clean+ r70

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture
Washing and cleaning products (including solvent based products)

1.3. Details of the supplier of the safety data sheet
Company name: BIZOL BITA Trading 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
Regulation (EC) No. 1272/2008
Hazard categories:
Serious eye damage/eye irritation: Eye Dam. 1

2.2. Label elements
Regulation (EC) No. 1272/2008
Hazard components for labelling
fatty alcohol ethoxylate
sulfonic acids, C14-17-sec-alkane, sodium salts
Signal word: Danger
Pictograms:

Hazard statements
H318 Causes serious eye damage.

Precautionary statements
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P280 Wear eye/face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.

2.3. Other hazards
Results of PBT and vPvB assessment: not applicable.

SECTION 3: Composition/information on ingredients

3.2. Mixtures
Chemical characterization
Blend of the following materials with non-hazardous additives.
Safety Data Sheet
according to Regulation (EC) No 1907/2006

Bizol Radiator Clean+ r70

Revision date: 28.01.2016

Hazardous components

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Quantity</th>
<th>EC No</th>
<th>Index No</th>
<th>REACH No</th>
</tr>
</thead>
<tbody>
<tr>
<td>9043-30-5</td>
<td>fatty alcohol ethoxylate</td>
<td>5 - &lt; 10 %</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>500-027-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>97489-15-1</td>
<td>sulfonic acids, C14-17-sec-alkane, sodium salts</td>
<td>1 - &lt; 5 %</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>307-055-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

- Acute Tox. 4, Eye Dam. 1; H302 H318
- Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Aquatic Chronic 3; H302 H315 H318 H412

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

Labelling for contents according to Regulation (EC) No 648/2004

- 5 % - < 15 % non-ionic surfactants, < 5 % anionic surfactants, preservation agents
- (3,3'-Methylenbis[5-methylloxazolidin], Formaldehyde).

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 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

**Suitable extinguishing media**
- alcohol resistant foam,
- Extinguishing powder,
- Carbon dioxide (CO2).

**Unsuitable extinguishing media**
- High power water jet.

5.2. Special hazards arising from the substance or mixture
Hazardous decomposition products: Carbon monoxide Carbon dioxide (CO2). 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
See protective measures under point 7 and 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
Absorb with liquid-binding material (e.g. 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
See protective measures under point 7 and 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
No special measures are necessary.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels
Protect against: Frost. Keep away from heat. Protect against 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

DNEL/DMEL values

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Substance</th>
<th>DNEL type</th>
<th>Exposure route</th>
<th>Effect</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>97489-15-1</td>
<td>sulfonic acids, C14-17-sec-alkane, sodium salts</td>
<td>Worker DNEL, acute</td>
<td>dermal</td>
<td>local</td>
<td>2.8 mg/cm²</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Worker DNEL, long-term</td>
<td>dermal</td>
<td>systemic</td>
<td>5 mg/kg bw/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumer DNEL, long-term</td>
<td>dermal</td>
<td>systemic</td>
<td>3.57 mg/kg bw/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumer DNEL, long-term</td>
<td>inhalation</td>
<td>systemic</td>
<td>12.4 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Worker DNEL, long-term</td>
<td>dermal</td>
<td>local</td>
<td>2.8 mg/cm³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Worker DNEL, long-term</td>
<td>inhalation</td>
<td>systemic</td>
<td>35 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumer DNEL, long-term</td>
<td>oral</td>
<td>systemic</td>
<td>7.1 mg/kg bw/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumer DNEL, acute</td>
<td>dermal</td>
<td>local</td>
<td>2.8 mg/cm³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumer DNEL, long-term</td>
<td>dermal</td>
<td>local</td>
<td>2.8 mg/cm³</td>
</tr>
</tbody>
</table>

PNEC values

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Substance</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>97489-15-1</td>
<td>sulfonic acids, C14-17-sec-alkane, sodium salts</td>
<td>9.4 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Freshwater sediment</td>
<td>9.4 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Marine sediment</td>
<td>0.94 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Micro-organisms in sewage treatment plants (STP)</td>
<td>600 mg/l</td>
</tr>
<tr>
<td></td>
<td>Soil</td>
<td>9.4 mg/kg</td>
</tr>
</tbody>
</table>
Appropriate engineering controls
See chapter 7. No additional measures necessary.

Protective and hygiene measures
When using do not eat, drink, smoke, sniff.

Eye/face protection
Eye glasses with side protection.

Hand protection
Wear suitable gloves. Recommended glove articles: DIN EN 374. Suitable material: NBR (Nitrile rubber). Breakthrough time (maximum wearing time): > 480 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
With correct and proper use, and under normal conditions, breathing protection is not required. When splashes or fine mist form, a permitted breathing apparatus suitable for these purposes must be used. Suitable respiratory protection apparatus: Filtering Half-face mask (DIN EN 149), e.g. FFA P / FFP3.

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Test method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>liquid</td>
<td></td>
</tr>
<tr>
<td>Colour</td>
<td>light yellow</td>
<td></td>
</tr>
<tr>
<td>Odour</td>
<td>characteristic</td>
<td></td>
</tr>
<tr>
<td>pH-Value</td>
<td>ca. 8.7</td>
<td></td>
</tr>
<tr>
<td>Changes in the physical state</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting point</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Pour point</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Lower explosion limits</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Upper explosion limits</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available.</td>
<td></td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td>1.03 g/cm³</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>easily soluble</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Viscosity / dynamic</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Viscosity / kinematic</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Flow time</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Vapour density</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>not determined</td>
<td></td>
</tr>
</tbody>
</table>

9.2. Other information
No 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 toxicological effects

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

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Exposure route</th>
<th>Dose</th>
<th>Species</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>9043-30-5</td>
<td>fatty alcohol ethoxylate</td>
<td>oral</td>
<td>ATE</td>
<td>500 mg/kg</td>
<td></td>
</tr>
<tr>
<td>97489-15-1</td>
<td>sulfonic acids, C14-17-sec-alkane, sodium salts</td>
<td>oral</td>
<td>ATE</td>
<td>500 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

Irritation and corrosivity
Causes serious eye damage.
Skin corrosion/irritation: 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.

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.

Practical experience
Keeping to the general worker's protection rules and the industrial hygienics, there is no risk in handling this product through the personnel.

Other observations

SECTION 12: Ecological information

12.1. Toxicity
There are no data available on the mixture itself.
12.2. Persistence and degradability

There are no data available on the mixture itself.

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Method</th>
<th>Value</th>
<th>d</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>97489-15-1</td>
<td>sulfonic acids, C14-17-sec-alkane, sodium salts</td>
<td>Biodegradation</td>
<td>78%</td>
<td>28</td>
<td>OECD 301B/ ISO 9439/ EEC 92/69/V, C.4-C</td>
</tr>
</tbody>
</table>

Readily biodegradable (according to OECD criteria).

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

No data available

12.6. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal
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 91/889/EEC in the corresponding versions, covering waste and dangerous waste.

Waste disposal number of waste from residues/unused products
070601 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics; aqueous washing liquids and mother liquors Classified as hazardous waste.

Waste disposal number of used product
200129 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately collected fractions (except 15 01); detergents containing hazardous substances Classified as hazardous waste.

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: No dangerous good in sense of this transport regulation.

14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Marine transport (IMDG)
14.1. UN number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)
14.1. UN number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

14.5. Environmental hazards
ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user
No data available

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
No data available

SECTION 15: Regulatory information

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

EU regulatory information
2010/75/EU (VOC): 0,1 %

National regulatory information
Water contaminating class (D): 2 - water contaminating

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

SECTION 16: Other information

Abbreviations and acronyms
ADR: Accord européen relatif au transport international des marchandises dangereuses par route (European 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
VwVwS: Verwaltungsvorschrift wassergefährdende Stoffe

Relevant H and EUH statements (number and full text)
H302 Harmful if swallowed.
H315 Causes skin irritation.
Bizol Radiator Clean+ r70

H318 Causes serious eye damage.
H412 Harmful to aquatic life with long lasting effects.

Further Information
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.

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