

Revision date:
11.02.2021**Bizol Copper+ L54**

Page 1 of 9

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

Bizol Copper+ L54

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

Lubricating agent

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:

Aerosol: Aerosol 1

Specific target organ toxicity - single exposure: STOT SE 3

Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:

Extremely flammable aerosol.

Pressurised container: May burst if heated.

May cause drowsiness or dizziness.

Toxic to aquatic life with long lasting effects.

2.2. Label elements**Regulation (EC) No. 1272/2008****Hazard components for labelling**

pentane

Signal word: Danger**Pictograms:****Hazard statements**

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P102	Keep out of reach of children.
P260	Do not breathe aerosol.
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.

Bizol Copper+ L54

Revision date:
11.02.2021

Page 2 of 9

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501 Dispose of contents/container to Dispose of waste according to applicable legislation..

Special labelling of certain mixtures

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

Prolonged or repeated skin contact may cause removal of natural fat from the skin resulting in dermatitis (skin inflammation). Narcotic effects.

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.

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
109-66-0	pentane			25 - < 50 %
	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			
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			10 - < 12,5 %
	203-448-7	601-004-00-0	01-2119474691-32	
	Flam. Gas 1, Compressed gas; H220 H280			
75-28-5	isobutane			10 - < 12,5 %
	200-857-2	601-004-00-0	01-2119485395-27	
	Flam. Gas 1, Compressed gas; H220 H280			
7440-50-8	copper			2,5 - < 5,0 %
	231-159-6		01-2119480154-42	
	Acute Tox. 4, Aquatic Acute 1, Aquatic Chronic 1; H302 H400 H410			

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	25 - < 50 %
		inhalation: LC50 = 364 mg/l (vapours)	
106-97-8	203-448-7	butane	10 - < 12,5 %
		inhalation: LC50 = 658 ppm (gases)	
7440-50-8	231-159-6	copper	2,5 - < 5,0 %
		oral: ATE = 500 mg/kg	

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.

Revision date:
11.02.2021**Bizol Copper+ L54**

Page 3 of 9

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 drunk 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

Full 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****General measures**

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

Bizol Copper+ L54

Revision date:
11.02.2021

Page 4 of 9

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

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

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
106-97-8	Butane	600	1450		TWA (8 h)	WEL
		750	1810		STEL (15 min)	WEL
7440-50-8	Copper, dusts and mists (as Cu)	-	1		TWA (8 h)	WEL
		-	2		STEL (15 min)	WEL
109-66-0	Pentane	600	1800		TWA (8 h)	WEL

8.2. Exposure controls

Appropriate engineering controls

See section 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: 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 (DIN EN 149), e.g. FFA P / Full-/half-/quarter-face masks (DIN 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:	bronze	
Odour:	characteristic	
pH-Value:		not determined

Changes in the physical state

Melting point:		not determined
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Revision date:
11.02.2021**Bizol Copper+ L54**

Page 5 of 9

Boiling point or initial boiling point and
boiling range: not applicable

Pour point: not determined

Flash point: < 0 °C

Flammability

Solid/liquid: not applicable

Gas: not applicable

Explosive properties

The product is: not explosive. Heating causes rise in pressure with risk of bursting. In use may form flammable/explosive vapour-air mixture.

Lower explosion limits: 1,4 vol. %

Upper explosion limits: 10,9 vol. %

Auto-ignition temperature: 285 °C

Decomposition temperature: not determined

Vapour pressure:
(at 20 °C) 8300 hPaDensity (at 20 °C): 0,81 g/cm³

Water solubility: Immiscible

Partition coefficient n-octanol/water: not determined

Viscosity / dynamic: not determined

Viscosity / kinematic: not determined

Flow time: not determined

Relative vapour density: not determined

Evaporation rate: not applicable

9.2. Other information

Solid content: 19,5 %

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 hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity**

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

Revision date:
11.02.2021

Bizol Copper+ L54

Page 6 of 9

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
109-66-0	pentane				
	inhalation (4 h) vapour	LC50 364 mg/l	Rat	GESTIS	
106-97-8	butane				
	inhalation (4 h) gas	LC50 658 ppm	Rat	GESTIS	
7440-50-8	copper				
	oral	ATE 500 mg/kg			

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

May cause drowsiness or dizziness. (pentane)

STOT-repeated exposure

Repeated exposure may cause skin dryness or cracking.

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.

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
109-66-0	pentane	3,39
74-98-6	propane	2,36
106-97-8	butane	2,89
75-28-5	isobutane	2,8

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

No data available

12.7. Other adverse effects

No data available

SECTION 13: Disposal considerations
13.1. Waste treatment methods

Revision date:
11.02.2021

Bizol Copper+ L54

Page 7 of 9

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

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: 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: UN 1950
14.2. UN proper shipping name: AEROSOLS (PENTANES)
14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
 Hazard label: 2.1



Marine pollutant: YES
 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: UN 1950
14.2. UN proper shipping name: AEROSOLS, flammable
14.3. Transport hazard class(es): 2.1
14.4. Packing group: -

Revision date:
11.02.2021**Bizol Copper+ L54**

Page 8 of 9

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:

Yes



Danger releasing substance:

PENTANES

14.6. Special precautions for user

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 3, Entry 28

2010/75/EU (VOC):

70,5 % (568 g/l)

National regulatory information

Water hazard class (D):

2 - obviously 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): 1,2,3,7,8,9,11,13,14,15.

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)

Revision date:
11.02.2021**Bizol Copper+ L54**

Page 9 of 9

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.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic 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) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

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.)