

Safety data sheet

according to Directive (EC) no. 1907/2006 and Directive (EU)
no. 453/2010 (REACH)



Trading name: Zinc repair spray

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1. Material/preparation and company designation

1.1 Product identifier

Trading name: Zinc repair spray

Item number: 2362970,

Type: ZSF

Recommended purpose: Zinc-coloured spray for touching-up hot galvanised parts.

See instructions for use.

1.2 Relevant identified uses of the substance or mixture and uses we would not recommend: -

1.3 Manufacturer/supplier

OBO Bettermann Holding GmbH & Co. KG

P.O. Box 1120

58694 Menden

Germany

Division providing information

Customer Service

Tel.: +49 (0)2373 89-1700

E-mail: export@obo.de

1.4 Emergency telephone number

REACH Registration of Chemicals GmbH

Tel.: +49 (0)700 2411 2112 (OBO)

Tel.: +1 872 5888271 (OBO)

2. Possible risks

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Aerosol 1	H222-H229	Extremely flammable aerosol. Pressurised container: May burst if heated.
Eye Irrit. 2	H319	Causes serious eye irritation.
STOT SE 3	H336	May cause drowsiness and dizziness.
Aquatic Chronic 3	H412	Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS02 GHS07

Signal word Danger

Hazardous components for labelling:

Acetone

Naphtha (petroleum), hydrotreated heavy

Naphtha (petroleum), hydrotreated heavy

hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclenes, aromates (2-25%)

Hazard statements

H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.

H319 Causes serious eye irritation.

H336 Can cause drowsiness and dizziness.

H412 Harmful to aquatic life with long-lasting effects.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

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.

P260 Do not breathe mist/vapours/spray.

P280 Wear protective gloves / eye protection / face protection.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405 Store locked up.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional data:

Contains 2-butanone oxime. May produce an allergic reaction.

Restricted to professional users.

2.3 Other hazards

Results of PBT and vPvB assessment

- PBT: Not applicable.
- vPvB: Not applicable.

3. Composition/details of component parts

3.1 Substances

N/A

3.2 Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Hazardous contents		
CAS: 67-64-1 EINECS: 200-662-2 Reg.no.: 02-2119752542-40-0000 01-2119471330-49-0000	Acetone Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	25 -50%
CAS: 106-97-8 EINECS: 203-448-7	Butane Flam. Gas 1, H220; Press. Gas C, H280	10 - 5%
CAS: 74-98-6 EINECS: 200-827-9	Propane Flam. Gas 1, H220; Press. Gas C, H280	10 - 25%
CAS: 64742-48-9 EINECS: 265-150-3 Reg.nr.: 01-2119455851-35	Naphtha (petroleum), hydrotreated heavy Flam. Liq. 3, H226; STOT RE 1, H372; Asp. Tox. 1, H304; Aquatic Chronic 3; H411 STOT SE 3, H336	≥2.5 -< 10%
CAS: 7429-90-5 Reg.nr.: 01-2119529243-45	aluminium powder (stabilized) Flam. Sol. 1, H228	< 5%
CAS: 1330-20-7 EINECS: 215-535-7 Reg.nr.: 01-2119488216-32-xxxx	Xylene Flam. Liq. 3, H226; STOT RE 2, H373; Asp. Tox. 1, H304; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	< 5%
CAS: 64742-48-9 EINECS: 265-150-3 Reg.nr.: 01-2119463258-33-0000	Naphtha (petroleum), hydrotreated heavy Flam. Liq. 3, H226; Asp. Tox. 1, H304; STOT SE 3, H336	< 5%
EC number: 919-446-0	Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclenes, aromates (2-25%) Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; STOT SE 3, H336	≥ 0.25 -< 2.5%
CAS: 7440-66-6 EINECS: 231-175-3 Reg.no.: 01-2119467174-37	Zinc powder – zinc dust (stabilised) Aquatic Acute 1, H400; Aquatic Chronic 1, H410	≥ 0.25 -< 2.5%
CAS: 96-29-7 EINECS: 202-496-6	2-butanone oxime Carc. 2, H351; Eye Dam. 1, H318; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Sens. 1, H317	≥ 0.1 -< 1%

Additional information:

For the wording of the listed hazard phrases refer to section 16.

4. First aid measures

4.1 Description of the first aid measures

General information

Take affected persons out of danger area and lay down.
Immediately remove any clothing soiled by the product.

After inhalation:

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

After eye contact:

Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing:

Do not induce vomiting; call for medical help immediately.

A person vomiting while laying on their back should be turned onto their side.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agent:

Alcohol-resistant foam, CO₂, sand, extinguishing powder. Do not use water.

Unsuitable extinguishing agents for safety reasons: Full jet of water.

5.2 Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

Heat leads to increase of pressure and to danger of bursting!

5.3 Advice for firefighters

Protective equipment: Wear self-contained respiratory protective device. Additional information

Additional information: Cool endangered containers with a spray water jet.

6. Measures in the case of unintentional release

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

Wear protective equipment. Keep unprotected persons away.

Keep away from ignition sources.

Avoid contact with eyes and skin.

6.2 Environmental precautions

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Ensure adequate ventilation.

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. Handling and storage

7.1 Precautions for safe handling

Keep away from heat and direct sunlight.
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.

Information about fire - and explosion protection:

Do not spray onto a naked flame or any incandescent material.
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles

Store in a cool location.
Store only in the original receptacle.
Observe official regulations on storing packagings with pressurised containers.

Information about storage in one common storage facility

Store away from oxidising agents.
Store away from foodstuffs.

Further information about storage conditions

Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.

Storage class: LGK 2B (TRGS 510, only german directive)

7.3 Specific end use(s)

No further relevant information available.

8. Exposure controls/personal protection

Additional information about design of technical facilities

No further data, see item 7.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace

Bestandteile mit arbeitsplatzbezogenen, zu überwachenden Grenzwerten:	
67-64-1 Acetone	
WEL	Short-term value: 3620 mg/m ³ , 1500 ppm Long-term value: 1210 mg/m ³ , 500 ppm
106-97-8 Butane	
WEL	Short-term value: 1810 mg/m ³ , 750 ppm Long-term value: 1450 mg/m ³ , 600 ppm Carc (if more than 0.1% of buta-1.3-diene)
1330-20-7 xylene	
WEL	Short-term value: 441 mg/m ³ , 100 ppm Long-term value: 220 mg/m ³ , 50 ppm Sk; BMGV

DNELs		
64742-48-9 Naphtha (petroleum), hydrotreated heavy		
Oral	DNEL long-term exposure – systemic effects	300 mg/kg (population (Verbraucher))
Dermal	DNEL long-term exposure – systemic effects	300 mg/kg (population (Verbraucher)) 300 mg/kg (worker ((Arbeiter/Arbeitnehmer)))
Inhalative	DNEL long-term exposure – systemic effects	900 mg/m ³ (population (Verbraucher)) 1,500 mg/m ³ (worker (Arbeiter/Arbeitnehmer))
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclenes, aromates (2-25%)		
Oral	DNEL long-term exposure – systemic effects	26 mg/kg (population (Verbraucher))
Dermal	DNEL long-term exposure – systemic effects	26 mg/kg bw/d (population (Verbraucher)) 44 mg/kg bw/d (worker (Arbeiter/Arbeitnehmer))
Inhalative	DNEL long-term exposure – systemic effects	71 mg/m ³ (population (Verbraucher))

Ingredients with biological limit values:	
1330-20-7 xylene	
BMGV	650 mmol/mol creatinine Medium: urine Sampling time: post shift Parameter: methyl hippuric acid

Additional information

The lists valid during the making were used as basis.

8.2 Exposure controls**Personal protective equipment:****General protection and hygiene measures**

Do not eat, drink, smoke or sniff while working.

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

Respiratory protection

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

In case of working at not adequately ventilated work places and spraying, breathing protection is obligatory.

We recommend a fresh air helmet or a composite filter (only for short-term jobs): Filter A-P2 (EN 14387)

Protection of hands

Solvent resistant gloves



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

e.g.:

Butyl rubber, BR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection

Safety glasses



Tightly sealed goggles

Body protection

Protective work clothing

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

General information

Appearance

Form: Aerosol

Colour: According to product specification

Odour: Characteristic

Odour threshold: Not determined.

pH-value: Not determined.

Change in condition

Melting point/freezing point: Undetermined.

Initial boiling point and boiling range: -44 °C

Flash point: < 0 °C

Flammability (solid, gas): Not applicable.

Ignition temperature: 365 °C

Decomposition temperature: Not determined.

Auto-ignition temperature: Product is not selfigniting.

Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

Explosion limits

Lower: 1.5 Vol %

Upper: 13.0 Vol %

Vapour pressure at 20 °C: 8300 hPa

Density at 20 °C: ~ 0.73 g/cm³

Relative density Not determined.

Vapour density Not determined.

Evaporation rate Not applicable.

Solubility in / Miscibility with water: Not miscible or difficult to mix.

Partition coefficient: n-octanol/water: Not determined.

Viscosity:

Dynamic: Not determined.

Kinematic: Not determined.

9.2 Other information

No further relevant information available.

9.3 Other data

No other relevant information available.

10. Stability and reactivity

10.1 Reactivity

No further relevant information available.

10.2 Chemical stability

Thermal decomposition/conditions to be avoided:

Protect from heat and direct sunlight.

10.3 Possibility of hazardous reactions

Danger of bursting

10.4 Conditions to avoid

No further relevant information available.

10.5 Incompatible materials

Acids, bases and oxidants.

10.6 Hazardous decomposition products

No dangerous decomposition products known.

11. Toxicological data

11.1 Information on toxicological effects

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

LD/LC50 values relevant for classification:

64742-48-9 Naphtha (petroleum), hydrotreated heavy

Oral	LD50	> 5,000 mg/kg (rat)
Dermal	LD50	> 3,160 mg/kg (rabbit)
Inhalative	LC50/4 h	> 4,951 mg/l (rat)
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclenes, aromates (2-25%)		
Oral	LD50	>15,000 mg/kg (rat)
Dermal	LD50	3,400 mg/kg (rat)

Primary irritant effect:

Skin corrosion/irritation

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

Serious eye damage/irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

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

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

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

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

STOT-single exposure: May cause drowsiness or dizziness.

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.

12. Ecological information

12.1 Toxicity

Aquatic toxicity	
64742-48-9 Naphtha (petroleum), hydrotreated heavy	
LC50/96 h	> 10-30 mg/l (fish)
EC50/48 h	> 22-46 mg/l (daphnia)

12.2 Persistence and degradability

No further relevant information available.

12.3 Bioaccumulation potential

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

Ecotoxic impacts:

Remark: Harmful to fish.

Additional ecological information:

General notes:

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 aquatic organisms.

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. Disposal considerations

13.1 Waste treatment method

Recommendation:

Must not be disposed together with household garbage. Do not allow product to reach sewage system. Disposal must be made according to official regulations.

European Waste Directory

Waste code number: 16 05 04 = gases in pressure containers (including halons) containing hazardous substances

Uncleaned packaging

Recommendation: Disposal must be made according to official regulations.

14. Transport information

14.1 UN number

ADR, IMDG, IATA UN1950

14.2 UN proper shipping name

ADR: 1950 AEROSOLS

IMDG: AEROSOLS

IATA: AEROSOLS, flammable

14.3 Transport hazard class(es)

ADR



Class: 2 5F Gases

Hazard label: 2.1

IMDG, IATA



Class: 2.1

Label: 2.1

14.4 Packaging group

ADR, IMDG, IATA: Void

14.5 Environmental risks

Marine pollutant: No

14.6 Special precautions for user

Warning: Gases

Kemler number: -

EMS number: F-D,S-U

Stowage Code: SSW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.

Segregation Code: SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

Transport/additional information

ADR

Limited quantity (LQ): 1L

Excepted quantities (EQ): Code: E0

Not permitted as Excepted Quantity

Transport category: 2

Tunnel limitation code: D

IMDG

Limited quantities (LQ): 1L

Excepted quantities (EQ) Code E0
Not permitted as Excepted Quantity.

UN "Model Regulation"
UN1950, AEROSOLS, 2.1

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Directive 2012/18/EU

Named dangerous substances - ANNEX I: None of the ingredients is listed.

Seveso category: P3a FLAMMABLE AEROSOLS

Qualifying quantity (tonnes) for the application of lower-tier requirements: 150 t

Qualifying quantity (tonnes) for the application of upper-tier requirements: 500 t

REGULATION (EC) No 1907/2006 ANNEX XVII: Conditions of restriction: 3

15.2 Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

16. Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases

H220 Extremely flammable gas.

H225 Highly flammable liquid and vapour.

H226 Flammable liquid and vapour.

H228 Flammable solid.

H280 Contains gas under pressure; may explode if heated.

H304 May be fatal if swallowed and enters airways.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

H351 Suspected of causing cancer.

H373 May cause damage to organs through prolonged or repeated exposure.

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.

H412 Harmful to aquatic life with long lasting effects.

Department issuing SDS:

Department: Technical documentation, see Item 1

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Gas 1: Flammable gases – Category 1
Aerosol 1: Aerosols – Category 1
Press. Gas C: Gases under pressure – Compressed gas
Flam. Liq. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Flam. Sol. 1: Flammable solids – Category 1
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3