

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31



Trading name: Zinc repair spray

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 Version: 1.1 Version to be replaced: 1.0
 Number of pages: 13

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 advised against

No further relevant information available.

Application of the substance / the mixture

Touch-up spray

1.3 Manufacturer/supplier

OBO Bettermann Holding GmbH & Co. KG
 P.O. Box 1120
 58710 Menden
 Germany

Division providing information

Customer service
 Tel.: +49 2373 89 - 17 00
 E-mail: export@obo.de

1.4 Emergency telephone number

REACH Registration of Chemicals GmbH
 Tel.: +49 (0)700 24112112 (OBO)
 Tel.: +1 872 5888271 (OBO)

2. Possible risks

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

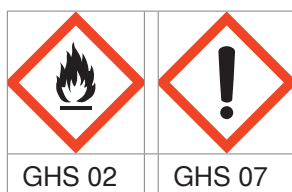
Aerosol1	H222-H229	Extremely flammable aerosol. Pressurised container: May burst if heated.
Eye Irrit. 2	H319	Causes serious eye irritation.
STOT SE 3	H336	May cause drowsiness and dizziness.
Aquatic Chronic 3	H412	Harmful to aquatic life with long lasting effects.

2.1 Label elements

Labelling according to Regulation (EC) No 1272/2008

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

Hazard pictograms



Signal word

Danger

Hazardous components for labelling

acetone

Naphtha (petroleum), hydrotreated heavy, C9 - C10

Naphtha (petroleum), hydrotreated heavy, hydrocarbons C9-C11

Hazard statements

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

H319 Causes serious eye irritation.

H336 May cause drowsiness or 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 carefully and follow all instructions.

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.

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

Product contains: Reportable explosives precursors. Making available, introduction, possession and use according to Regulation (EU) 2019/1148, Article 9.

2.2 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

3. Composition/details of component parts

3.1 Substances

3.2 Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Composition/information on ingredients

Hazardous components:		
CAS: 67-64-1 EINECS: 200-662-2 Index number: 606-001-00-8	acetone ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336, EUH066	25-50%
CAS: 106-97-8 EINECS: 203-448-7 Index number: 601-004-00-0	butane, pure ⚠ Flam. Gas 1A, H220; Press. Gas (Comp.), H280	10-25%
CAS: 74-98-6 EINECS: 200-827-9 Index number: 601-003-00-5	propane ⚠ Flam. Gas 1A, H220; Press. Gas (Comp.), H280	10-25%
CAS: 64742-48-9 EC number: 927-241-2	Naphtha (petroleum), hydrotreated heavy, C9 - C10 ⚠ Flam. Liq. 3, H226; ⚠ Asp. Tox. 1, H304; ⚠ STOT SE 3, H336; Aquatic Chronic 3, H412	2,5-10%
CAS: 7429-90-5 Reg.nr.: 01-2119529243-45 Index number: 013-002-00-1	aluminium powder (stabilized) ⚠ Flam. Sol. 1, H228	<5%
EC number: 905-588-0	xylene Consisting of: 1330-20-7 xylene (≥75%); 100-41-4 ethylbenzene (<25%) ⚠ 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 Specific concentration limit: STOT RE 2; H373: C ≥ 10%	<5%
CAS: 64742-48-9 EC number: 919-857-5	Naphtha (petroleum), hydrotreated heavy, hydrocarbons C9-C11 ⚠ Flam. Liq. 3, H226; ⚠ Asp. Tox. 1, H304; ⚠ STOT SE 3, H336	<5%
CAS: 64742-48-9 EC number: 918-481-9	Naphtha (petroleum), hydrotreated heavy ⚠ Asp. Tox. 1, H304	≤2,5%
CAS: 7440-66-6 EINECS: 231-175-3 Index number: 030-001-01-9	zinc powder -zinc dust (stabilized) ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	≥0,25-<2,5%

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

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, powder.

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: 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).
 Dispose contaminated material as waste according to section 13.
 Ensure adequate ventilation.
 Do not flush with water or aqueous cleansing agents

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.
 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.
 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.
 Observe official regulations on storing packagings with pressurised containers

Information about storage in one common storage facility

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.

Storage class: 2 B

7.3 Specific end use(s)

No further relevant information available.

8. Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace

67-64-1 acetone	
IOELV	Long-term value: 1210 mg/m ³ , 500 ppm
xylene	
AGW	Short-term value: 442 mg/m ³ , 100 ppm Long-term value: 221 mg/m ³ , 50 ppm

Regulatory information

IOELV: (EU) 2019/1831

DNELs		
xylene		
Dermal	DNEL long-term exposure - systemic effects	212 mg/kg bw/d (worker (Arbeiter/Arbeitnehmer))
Inhalative	DNEL long-term exposure - systemic effects	221 mg/m ³ (worker (Arbeiter/Arbeitnehmer))

PNECs	
xylene	
PNEC STP (Kläranlage)	6.58 mg/l (sewage plant (Kläranlage))
PNEC (Boden)	2.31 mg/kg (soil (Boden))
PNEC (Meerwasser)	0.327 mg/l (water (Wasser))
PNEC (Süßwasser)	0.327 mg/l (water (Wasser))
PNEC (Sediment Meerwasser)	12.64 mg/kg (sediment (Sediment))
PNEC (Sediment Süßwasser)	12.64 mg/kg (sediment (Sediment))

Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls

Appropriate engineering controls: No further data; see section 7.

Individual protection measures, such as personal protective equipment

General protective and hygienic measures:

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.

Do not inhale gases / fumes / aerosols.

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):
breathing filter A2-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.

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

Physical state	Aerosol	
Colour:	According to product specification	
Odour:	Characteristic	
Odour threshold:	Not determined.	
Melting point/freezing point:	Undetermined.	
Boiling point or initial boiling point and boiling range		-44 °C
Flammability	Not applicable.	
Lower and upper explosion limit		
Lower:	1.5 Vol %	
Upper:	13 Vol %	
Flash point:	< 0 °C	
Auto-ignition temperature:	365 °C	
Decomposition temperature:	Not determined.	
pH	Not determined.	
Viscosity:		
Kinematic viscosity	Not determined.	
Dynamic:	Not determined.	
Solubility		
water:	Not miscible or difficult to mix.	
Partition coefficient n-octanol/water (log value)		Not determined.
Vapour pressure at 20 °C:	8,300 hPa	
Density and/or relative density		
Density at 20 °C:	~ 0.73 g/cm ³	
Relative density	Not determined.	
Vapour density	Not determined.	

9.2 Other information

Appearance:

Form: Aerosol

Important information on protection of health and environment, and on safety.

Ignition temperature:: Product is not selfigniting.

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

Change in condition

Evaporation rate: Not applicable.

Information with regard to physical hazard classes

Explosives

Flammable gases: Void
Aerosols: Extremely flammable aerosol. Pressurised container: May burst if heated.
Oxidising gases: Void
Gases under pressure: Void
Flammable liquids: Void
Flammable solids: Void
Self-reactive substances and mixtures: v
Pyrophoric liquids: Void
Pyrophoric solids: Void
Self-heating substances and mixtures: Void
Substances and mixtures, which emit flammable gases in contact with water: Void
Oxidising liquids: Void
Oxidising solids: Void
Organic peroxides: Void
Corrosive to metals: Void
Desensitised explosives: Void

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

Acute toxicity

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

xylene		
Dermal	ATE	1,100 mg/kg (ATE)
Inhalative	ATE	11 mg/l (ATE)
LD/LC50 values relevant for classification		
xylene		
Oral	LD50	3,523 mg/kg (rat)
Inhalative	LC50/4 h	21.7 mg/l (rat)

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.

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.

11.2 Angaben über sonstige Gefahren

Endocrine disrupting properties

None of the ingredients is listed.

12. Ecological information

12.1 Toxicity

Aquatic toxicity:	
xylene	
LC50/96 h	2.6 mg/l (fish)

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.

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

12.7 Other adverse effects

Remark: Harmful to fish

Additional ecological information:

General notes:

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.

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Harmful to aquatic organisms

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 catalogue	
16 05 04	gases in pressure containers (including halons) containing hazardous substances
15 01 04	metallic packaging

Uncleaned packaging

Recommendation: Disposal must be made according to official regulations.

14. Transport information

14.1 UN number

ADR/RID, IMDG, IATA UN1950

14.2 UN proper shipping name

ADR/RID 1950 AEROSOLS
IMDG AEROSOLS
IATA AEROSOLS, flammable

14.3 Transport hazard class(es)

ADR/RID



Class: 2 5F Gases
Hazard label: 2.1

IMDG, IATA



Class: 2.1 Gase
Label: 2.1

14.4 Packaging group

ADR/RID, IMDG, IATA: Void

14.5 Environmental risks

Marine pollutant: No

14.6 Special precautions for user

Warning: Gases.

Hazard identification number (Kemler code):: -

EMS-Number: F-D, S-U

Stowage Code: SW1 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 Maritime transport in bulk according to IMO instruments

Not applicable.

Transport/additional information

ADR/RID

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“: UN 1950, AEROSOLS, 2.1

15. Regulatory information

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

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

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

REGULATION (EU) 2019/1148

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS

67-64-1 acetone

Regulation (EC) No 273/2004 on drug precursors

67-64-1 acetone

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

67-64-1 acetone

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.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
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.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

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 relatif au transport international 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)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Gas 1A: 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 Irrit. 2: Serious eye damage/eye irritation – 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 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

Department issuing SDS

Department: Technical documentation, see Item 1