

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

1.1 Product identifier

Trade name: Zinc Aluspray

This safety data sheet pertains to the following products:
407708 = Zinc Aluspray

1.2 Relevant identified uses of the substance or mixture and uses advised against

General use: Varnish.
Restricted to professional users.

1.3 Details of the supplier of the safety data sheet

Company name: Berner Produkten b.v.

Street/POB-No.: Vogelzankweg 175

Postal Code, city: 6374 AC Landgraaf
Netherlands

WWW: www.berner.nl

E-mail: info@berner.nl

Telephone: +31 45 53 39 133

Department responsible for information:

E-mail: Productsafety.Chemicals@berner-group.com

1.4 Emergency telephone number

Poisons information service:

National Poisons Information Service (Birmingham Unit): 844 892 0111

Transport:

CONSULTANK Lutz Harder GmbH (Contract Qualisys/Berner)

Telephone: +49 (178) 4337434 (from USA: 01149 178 4337434)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to EC regulation 1272/2008 (CLP)

Aerosol 1; H222; H229 Extremely flammable aerosol. Pressurised container: May burst if heated.

Skin Irrit. 2; H315 Causes skin irritation.

Eye Irrit. 2; H319 Causes serious eye irritation.

STOT SE 3; H335 May cause respiratory irritation.

STOT RE 2; H373 May cause damage to organs through prolonged or repeated exposure.

Aquatic Chronic 3; H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (CLP)



Signal word:

Danger

Hazard statements:	H222	Extremely flammable aerosol.
	H229	Pressurised container: May burst if heated.
	H315	Causes skin irritation.
	H319	Causes serious eye irritation.
	H335	May cause respiratory irritation.
	H373	May cause damage to organs through prolonged or repeated exposure.
	H412	Harmful to aquatic life with long lasting effects.
Precautionary statements:	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 vapours and spray.
	P273	Avoid release to the environment.
	P312	Call a POISON CENTER/doctor if you feel unwell.
	P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Special labelling

Text for labelling: Contains Reaction mass of ethylbenzene and xylene

2.3 Other hazards

Potentially explosive mixtures may form if adequate ventilation is not provided.
Higher doses may lead to a narcotic effect.
The product is skin resorptive.

Endocrine disrupting properties, Results of PBT and vPvB assessment:

No data available

SECTION 3: Composition/information on ingredients

3.1 Substances: not applicable

3.2 Mixtures

Chemical characterisation: Blend of active ingredients with propellant.

Hazardous ingredients:

Identifiers	Designation Classification	Content
REACH 01-2119488216-32-xxxx list no. 905-588-0 CAS 1330-20-7	Xylene (isomeric mixture) Flam. Liq. 3; H226. Acute Tox. 4; H312. Acute Tox. 4; H332. Skin Irrit. 2; H315. Eye Irrit. 2; H319. STOT SE 3; H335. STOT RE 2; H373. Asp. Tox. 1; H304.	25 - 50 %
REACH 01-2119471330-49-xxxx EC No. 200-662-2 CAS 67-64-1	Acetone Flam. Liq. 2; H225. Eye Irrit. 2; H319. STOT SE 3; H336. (EUH066).	5 - 10 %
REACH 01-2119529243-45-xxxx EC No. 231-072-3 CAS 7429-90-5	Aluminium powder, phlegmatized Flam. Sol. 1; H228.	< 2.5 %
REACH 01-2119467174-37-xxxx EC No. 231-175-3 CAS 7440-66-6	Zinc powder-zinc dust (stabilized) Aquatic Acute 1; H400. Aquatic Chronic 1; H410.	< 1 %
REACH 01-2119472128-37-xxxx EC No. 204-065-8 CAS 115-10-6	Dimethyl ether Flam. Gas 1; H220. Press. Gas (Comp.); H280.	50 - 75 %

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

Additional information: Contents of benzene (individual components): < 0.1 %
Information about Xylene (isomeric mixture):
Contains Ethylbenzene.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: If medical advice is needed, have product container or label at hand.
Take off contaminated clothing and wash it before reuse.

In case of inhalation: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Seek medical attention if problems persist.

Following skin contact: Immediately clean with water and soap followed by thorough rinsing. In case of skin reactions, consult a physician.

After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Subsequently consult an ophthalmologist.

After swallowing: Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Do not induce vomiting. Immediately get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

May cause respiratory irritation. May cause damage to organs through prolonged or repeated exposure. Causes skin irritation. Causes serious eye irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Symptoms of poisoning can only emerge after several hours; medical supervision is therefore essential for at least 48 hours.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: Water spray jet, Extinguishing powder, carbon dioxide.
In case of large fires: Water spray jet, alcohol resistant foam.

Extinguishing media which must not be used for safety reasons:

Full water jet

5.2 Special hazards arising from the substance or mixture

Extremely flammable aerosol. Pressurised container: May burst if heated.
May form dangerous gases and vapours in case of fire.
Furthermore, there may develop: carbon monoxide and carbon dioxide

5.3 Advice for firefighters

Special protective equipment for firefighters:

Wear self-contained positive pressure breathing apparatus and full firefighting protective clothing.

Additional information:

Hazchem-Code: -

Heating will lead to pressure increase: Danger of bursting and explosion. Use fine water spray to cool endangered containers.

Move undamaged containers from immediate hazard area if it can be done safely.

In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Do not allow fire water to penetrate into surface or ground water.

Fire residuals and contaminated extinguishing water must be disposed of in accordance with the regulations of the local authorities.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapours and spray. Avoid contact with the substance.
In case of leakage, eliminate all ignition sources. Provide adequate ventilation.
Wear appropriate protective equipment. Take off contaminated clothing and wash it before reuse. Keep unprotected people away.
Cordon off downwind area at risk and warn inhabitants.

6.2 Environmental precautions

Do not allow to enter into ground-water, surface water or drains. Danger of explosion!
In case of release, notify competent authorities.

6.3 Methods and material for containment and cleaning up

Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13).
Thoroughly clean surrounding area.
In case of greater quantities: Collect mechanically (use only explosion-proof equipment when pumping out).

6.4 Reference to other sections

Refer additionally to section 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed. Do not breathe vapours and spray. Do not get in eyes, on skin, or on clothing. Wear appropriate protective equipment.
Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.
Take off contaminated clothing and wash it before reuse.
Guarantee sufficient ventilation during and after use, in order to prevent vapour accumulation.
Have eye wash bottle or eye rinse ready at work place. When handling large quantities, supply emergency spray.

Precautions against fire and explosion:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Keep container tightly closed and in a well-ventilated place.
Keep container dry. Keep only in the original container.
Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
Store containers in upright position.

Hints on joint storage:

Keep away from food, drink and animal feedingstuffs.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters**

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
1330-20-7	Xylene (isomeric mixture)	Great Britain: WEL-STEL	441 mg/m ³ ; 100 ppm (may be absorbed through the skin)
		Great Britain: WEL-TWA	220 mg/m ³ ; 50 ppm (may be absorbed through the skin)
67-64-1	Acetone	Great Britain: WEL-STEL	3620 mg/m ³ ; 1500 ppm
		Great Britain: WEL-TWA	1210 mg/m ³ ; 500 ppm
7429-90-5	Aluminium powder, phlegmatized	Great Britain: WEL-TWA	10 mg/m ³ (inhalable fraction)
		Great Britain: WEL-TWA	4 mg/m ³ (respirable fraction)
115-10-6	Dimethyl ether	Great Britain: WEL-STEL	958 mg/m ³ ; 500 ppm
		Great Britain: WEL-TWA	766 mg/m ³ ; 400 ppm

Biological limit values:

CAS No.	Designation	Type	Limit value	Parameter	Sampling
1330-20-7	Xylene (isomeric mixture)	Great Britain:	650 mmol/mol	methyl	end of exposure or
		BMGV, urine	creatinine	hippuric acid	end of shift

8.2 Exposure controls

Provide good ventilation and/or an exhaust system in the work area.

Personal protection equipment**Occupational exposure controls**

Respiratory protection: In case of inadequate ventilation wear respiratory protection. Respiratory protection must be worn whenever the WEL levels have been exceeded.
Recommendation: wear a half mask respirator with type A2/P3 filter or better.
The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

Hand protection: Protective gloves according to EN 374.
Glove material: Butyl caoutchouc (butyl rubber)
Layer thickness: 0.4 mm
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection: Tightly sealed goggles according to BS EN ISO 16321-1:2022.

Body protection: Flame retardant, antistatic and chemical resistant protective clothing.

General protection and hygiene measures:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source.
Do not breathe vapours and spray. Do not get in eyes, on skin, or on clothing.
When using do not eat or drink.
Wash hands thoroughly after handling. Take off contaminated clothing and wash it before reuse.
Have eye wash bottle or eye rinse ready at work place. When handling large quantities, supply emergency spray.

Environmental exposure controls

Refer to "6.2 Environmental precautions".

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Physical state at 20 °C and 101.3 kPa: liquid Form: Aerosol Colour: Light grey
Odour:	Characteristic
Odour threshold:	No data available
pH:	No data available
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash point/flash point range:	-80 °C
Evaporation rate:	No data available
Flammability:	Extremely flammable aerosol.
Explosion limits:	LEL (Lower Explosion Limit): 1.00 Vol-% UEL (Upper Explosive Limit): 26.20 Vol-%
Vapour pressure:	at 20 °C: 4000 hPa
Vapour density:	No data available
Density:	0.7 g/mL
Water solubility:	not/slightly miscible
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity, kinematic:	No data available
Explosive properties:	Product is not explosive. Vapours can form explosive mixtures with air.
Oxidizing characteristics:	No data available

9.2 Other information

Ignition temperature:	240 °C
Solvent content:	95.8 %
Solid content:	9.1 %

SECTION 10: Stability and reactivity

10.1 Reactivity

Extremely flammable aerosol
Vapours can form explosive mixtures with air.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Pressurised container: May burst if heated.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

Thermal decomposition: No decomposition when used properly.
No data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Toxicological effects: The statements are derived from the properties of the single components. No toxicological data is available for the product as such.

Acute toxicity (oral): Based on available data, the classification criteria are not met.
ATEmix (calculated): > 2,000 mg/kg

Acute toxicity (dermal): Based on available data, the classification criteria are not met.
ATEmix (calculated): > 2,000 mg/kg

Acute toxicity (inhalative): Based on available data, the classification criteria are not met.
ATEmix (calculated): > 20 mg/L/4h

Skin corrosion/irritation: Skin Irrit. 2; H315 = Causes skin irritation.

Serious eye damage/irritation: Eye Irrit. 2; H319 = Causes serious eye irritation.

Sensitisation to the respiratory tract: Based on available data, the classification criteria are not met.

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

Germ cell mutagenicity/Genotoxicity: 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.

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): STOT SE 3; H335 = May cause respiratory irritation.

Specific target organ toxicity (repeated exposure): STOT RE 2; H373 = May cause damage to organs through prolonged or repeated exposure.

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

Other information: Information about Xylene (isomeric mixture): Information about Xylene (isomeric mixture):
LD50 Rat, oral: 3,520 mg/kg
LD50 Rabbit, dermal: > 2,000 mg/kg
LC50 Rat, inhalative: 29 mg/L/4h

Information about Acetone:
LD50 Rat, oral: 5,800 mg/kg
LD50 Rabbit, dermal: > 7,400 mg/kg
LC50 Rat, inhalative: 76 mg/L/4h

Information about Zinc powder-zinc dust (stabilized):
LD50 Rat, oral: > 2,000 mg/kg (OECD 401)
LC50 Rat, inhalative: > 5.410 mg/L/4h (OECD 403)

Symptoms

Inhaling can lead to irritations of the respiratory tract and mucous membrane.
Higher doses may lead to a narcotic effect.
After eye contact: Upon direct contact with eyes may cause burning, tearing, redness.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: Harmful to aquatic life with long lasting effects.
Information about Zinc powder-zinc dust (stabilized):
Daphnia toxicity:
EC50 Ceriodaphnia dubia: 0.413 mg Zn/L (pH < 7.0)
NOEC Daphnia magna (Big water flea): 82 µg Zn/L (pH 6.0)
algae toxicity:
IC50 Selenastrum capricornutum (green algae): 0.136 mg Zn/L (pH 7.0-8.5)
NOEC Selenastrum capricornutum (green algae): 19 µg Zn/L (pH 8.0)

12.2 Persistence and degradability

Further details: No data available

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water:
No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

General information: Do not allow to enter into ground-water, surface water or drains.
Avoid spills and leaks. Very small amounts contaminates drinking water.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste key number: 16 05 04* = Gases in pressure containers (including halons) containing hazardous substances/Aerosol
* = Evidence for disposal must be provided.

Recommendation: Do not pierce or burn, even after use.
Special waste. Dispose of waste according to applicable legislation.
Do not dispose of with household waste.

Package

Waste key number: 15 01 10* = packaging containing residues of or contaminated by dangerous substances
* = Evidence for disposal must be provided.

Recommendation: Dispose of waste according to applicable legislation.
Empty carefully and completely, if possible. Handle empty containers with care. Incineration may cause explosion.

SECTION 14: Transport information

14.1 UN number

ADR/RID, IMDG, IATA-DGR: UN 1950

14.2 UN proper shipping name

ADR/RID, IMDG: UN 1950, AEROSOLS
IATA-DGR: UN 1950, AEROSOLS, FLAMMABLE

14.3 Transport hazard class(es)

ADR/RID: Class 2, Code: 5F
IMDG: Class 2.1, Subrisk -
IATA-DGR: Class 2.1



14.4 Packing group

ADR/RID, IATA-DGR: not applicable
IMDG: -

14.5 Environmental hazards

Marine pollutant: no

14.6 Special precautions for user

Land transport (ADR/RID)

Warning board: RID: Kemmler-number 23, UN number UN 1950
Hazard label: 2.1
Special Provisions: 190 327 344 625
Limited quantities: 1 L
EQ: E0
Package - Instructions: P207 LP200
Package - Special Provisions: PP87 RR6 L2
Special provisions for packing together: MP9
Tunnel restriction code: D

Sea transport (IMDG)

EmS: F-D, S-U
Special Provisions: 63 190 277 327 344 381 959
Limited quantities: 1000 mL
Excepted quantities: E0
Package - Instructions: P207, LP200
Package - Provisions: PP87, L2
IBC - Instructions: -
IBC - Provisions: -
Tank instructions - IMO: -
Tank instructions - UN: -
Tank instructions - Provisions: -
Stowage and handling: SW1 SW22
Segregation: SG69
Properties and observations: -
Segregation group: none

Air transport (IATA)

Hazard label: Flamm. gas
Excepted Quantity Code: E0
Passenger and Cargo Aircraft: Ltd.Qty.: Pack.Instr. Y203 - Max. Net Qty/Pkg. 30 kg G
Passenger and Cargo Aircraft: Pack.Instr. 203 - Max. Net Qty/Pkg. 75 kg
Cargo Aircraft only: Pack.Instr. 203 - Max. Net Qty/Pkg. 150 kg
Special Provisions: A145 A167 A802
Emergency Response Guide-Code (ERG): 10L

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

National regulations - Great Britain

Hazchem-Code:

-

No data available

National regulations - EC member states

Further regulations, limitations and legal requirements:

Product:

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive]

Physical hazards: Code P3a, Quantity threshold 150 000 kg / 500 000 kg

Use restriction according to REACH annex XVII, no.: 3, 40, 75

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive]: P3a

Acetone:

Regulation (EU) No 2019/1148 (marketing and use of explosives precursors)

Aluminium powder, phlegmatized:

Regulation (EU) No 2019/1148 (marketing and use of explosives precursors)

15.2 Chemical Safety Assessment

For this mixture a chemical safety assessment is not required.

SECTION 16: Other information

Further information

Wording of the H-phrases under paragraph 2 and 3:

H220 = Extremely flammable gas.

H222 = Extremely flammable aerosol.

H225 = Highly flammable liquid and vapour.

H226 = Flammable liquid and vapour.

H228 = Flammable solid.

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.

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:

- Acute Tox.: Acute toxicity
- ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- Aerosol: Aerosol
- Aquatic Acute: Hazardous to the aquatic environment - acute
- Aquatic Chronic: Hazardous to the aquatic environment - chronic
- AS/NZS: Australian Standards/New Zealand Standards
- Asp. Tox.: Aspiration toxicity
- CAS: Chemical Abstracts Service
- CFR: Code of Federal Regulations
- CLP: Classification, Labelling and Packaging
- DMEL: Derived minimal effect level
- DNEL: Derived no-effect level
- EC: European Community
- EC50: Effective Concentration 50%
- EN: European Standard
- EQ: Excepted quantities
- EU: European Union
- Eye Irrit.: Eye irritation
- Flam. Gas: Flammable gases
- Flam. Liq.: Flammable liquid
- Flam. Sol.: Flammable solid
- IATA: International Air Transport Association
- IATA-DGR: International Air Transport Association – Dangerous Goods Regulations
- IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
- IC50: Inhibition Concentration 50%
- IMDG Code: International Maritime Dangerous Goods Code
- LC50: Median lethal concentration
- LD50: Lethal dose 50%
- LEL: Lower Explosion Limit
- MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
- NOEC: No Observed Effect Concentration
- OECD: Organisation for Economic Co-operation and Development
- OEL: Occupational Exposure Limit Value
- OSHA: Occupational Safety and Health Administration
- PBT: Persistent, bioaccumulative and toxic
- PNEC: Predicted no-effect concentration
- Press. Gas: Gases under pressure
- REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
- RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
- Skin Irrit.: Skin irritation
- STOT RE: Specific target organ toxicity - repeated exposure
- STOT SE: Specific target organ toxicity - single exposure
- TLV: Threshold Limit Value
- TRGS: Technical Rules for Hazardous Substances
- UN: United Nations
- vPvB: Very persistent and very bioaccumulative
- WEL: Workplace Exposure Limit

Reason of change: **General revision**

Date of first version: **23/8/2021**

Department issuing data sheet

Contact person: **see section 1: Department responsible for information**

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.