

SAFETY DATA SHEET

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

1.1. Product identifier

Trade name

Zink-Alu Spray

Product no.

-

REACH registration number

Not applicable

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

Relevant identified uses of the substance or mixture

NA

Metal surface treatment products, including galvanic and electroplating products, (PC14)

Non industrial spraying (PROC 11)

Formulation [mixing] of preparations and/or re-packaging (excluding alloys) (SU 10)

Professional uses: Public domain (administration, education, entertainment, services, craftsmen) (SU 22)

Formulation of preparations (ERC2)

Metal articles (AC7)

Uses advised against

-

The full text of any mentioned and identified use categories are given in section 16

1.3. Details of the supplier of the safety data sheet

Company and address

Pureno A/S

Rønnevangs Allé 8

3400 Hillerød

Denmark

Tlf.: +45 70 260 267

Contact person

Kenneth Christensen

E-mail

mail@pureno.dk

SDS date

2018-02-20

SDS Version

5.0

1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service). See section 4 "First aid measures".

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Aerosol 1; H222, H229

Skin Irrit. 2; H315

Aquatic Acute 1; H400

Aquatic Chronic 1; H410

See full text of H-phrases in section 2.2.

2.2. Label elements

Hazard pictogram(s)

**Signal word**

Danger

Hazard statement(s)

Extremely flammable aerosol. (H222)
 Pressurised container: May burst if heated. (H229)
 Causes skin irritation. (H315)
 Very toxic to aquatic life with long lasting effects. (H410)

Safety statement(s)

General If medical advice is needed, have product container or label at hand. (P101).
 Keep out of reach of children. (P102).
Prevention Do not pierce or burn, even after use. (P251).
Response Collect spillage. (P391).
Storage Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F.
 (P410+P412).
Disposal Dispose of contents/container to an approved waste disposal plant. (P501).

▼ Identity of the substances primarily responsible for the major health hazards

Not applicable

2.3. Other hazards

This product contains an organic solvent. Repeated or prolonged exposure to organic solvents may result in adverse effects to the nervous system and internal organs such as liver and kidneys.

▼ Additional labelling

Not applicable

▼ Additional warnings

Not applicable

VOC

Not applicable

SECTION 3: Composition/information on ingredients**▼ 3.1/3.2. Substances/Mixtures**

NAME:	propan-1-flydende-tilstand
IDENTIFICATION NOS.:	CAS-no: 74-98-6 EC-no: 200-827-9 Index-no: 601-003-00-5
CONTENT:	25-40%
CLP CLASSIFICATION:	Press. Gas H220
NAME:	zinc powder - zinc dust (pyrophoric)
IDENTIFICATION NOS.:	CAS-no: 7440-66-6 EC-no: 231-175-3 Index-no: 030-001-00-1
CONTENT:	25-40%
CLP CLASSIFICATION:	Flam. Sol. 1, Aquatic Acute 1, Aquatic Chronic 1 H228, H400, H410 (M-acute = 1) (M-chronic = 1)
NAME:	but-1-en
IDENTIFICATION NOS.:	CAS-no: 106-97-8 EC-no: 203-448-7 Index-no: 601-004-00-0
CONTENT:	15 - <25%
CLP CLASSIFICATION:	Flam. Gas 1 H220
NAME:	isobutan
IDENTIFICATION NOS.:	CAS-no: 75-28-5 EC-no: 200-857-2 Index-no: 601-004-00-0
CONTENT:	15 - <25%
CLP CLASSIFICATION:	Comp. Gas, Flam. Gas 1 H220, H280
NAME:	xylene, blanding af isomerer, kemisk rent
IDENTIFICATION NOS.:	CAS-no: 1330-20-7 EC-no: 215-535-7 Index-no: 601-022-00-9
CONTENT:	5 - <10%
CLP CLASSIFICATION:	Flam. Liq. 2, Acute Tox. 4, Skin Irrit. 2 H225, H312, H315, H332

NOTE:	SL
NAME:	2-methylbutan
IDENTIFICATION NOS.:	CAS-no: 78-78-4 EC-no: 201-142-8 Index-no: 601-006-00-1
CONTENT:	2.5 - <5%
CLP CLASSIFICATION:	Flam. Liq. 1, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2 H224, H304, H336, H411, EUH066
NOTE:	SL

(*) See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.
S = Organic solvent L = European occupational exposure limit.

Other information

ATEmix(inhale, vapour) > 20
ATEmix(inhale, dust/mist) > 5
ATEmix(inhale, gas) > 20000
ATEmix(dermal) > 2000
ATEmix(oral) > 2000
Skin Cat. 2 Sum = $\sum(Ci/S(G)CLi) = 0,56 - 0,84$
N chronic (CAT 1) Sum = $\sum(Ci/(M(chronic)^{i*25})) = 1,12 - 1,68$
N acute (CAT 1) Sum = $\sum(Ci/M(acute)^{i*25}) = 1,12 - 1,68$

SECTION 4: First aid measures

4.1. Description of first aid measures

▼ General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. The doctor can contact The National Poisons Information Service (dial 111, 24 h service). Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

▼ Inhalation

Bring the person into fresh air and stay with him/her.

▼ Skin contact

Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with soap and water. Skin cleanser can be used. DO NOT use solvents or thinners.

▼ Eye contact

Remove contact lenses and open eyes widely. Flush eyes with water or saline water(20-30°C) for at least 15 minutes. Seek medical assistance and continue flushing during transport.

Ingestion

Provide plenty of water for the person to drink and stay with him/her. In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the victim lean forward with head down to avoid inhalation of- or choking on vomited material.

Burns

Rinse with water until the pain stops then continue to rinse for a further 30 minutes.

4.2. Most important symptoms and effects, both acute and delayed

Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

▼ 4.3. Indication of any immediate medical attention and special treatment needed

Nothing special

Information to medics

Bring this safety data sheet.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Recommended: alcohol-resistant foam, carbonic acid, powder, water mist. Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous catabolic substances are produced. These are: Carbon oxides. Fire will result in dense black smoke. Exposure to combustion products may harm your health. Fire fighters should wear appropriate protection equipment. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Storages not yet ignited must be cooled by water mist. Remove flammable materials if conditions allow it. Ensure sufficient ventilation.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc. In the event of leakage to the surroundings, contact local environmental authorities. It is recommended to install waste collection trays to prevent emissions to the waste water system and surrounding environment.

6.3. Methods and material for containment and cleaning up

Use sand, sawdust, earth, vermiculite, diatomaceous earth to contain and collect non-combustible absorbent materials and place in container for disposal, according to local regulations. To the extent possible cleaning is performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section on "Disposal considerations" in regard of handling of waste. See section on 'Exposure controls/personal protection' for protective measures.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Avoid static electricity.
Smoking, storage of tobacco, consumption and storage of food or liquids are not allowed in the workrooms. It is recommended to install waste collection trays to prevent emissions to the waste water system and surrounding environment. See section on 'Exposure controls/personal protection' for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Always store in containers of the same material as the original container. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Must be stored in a cool and well-ventilated area, away from possible sources of ignition.

Storage temperature

No data available.

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2

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

2-methylbutan

Long-term exposure limit (8-hour TWA reference period): 600 ppm | 1800 mg/m³

Short-term exposure limit (15-minute reference period): - ppm | - mg/m³

xylene, blending of isomerer, kemisk rent

Long-term exposure limit (8-hour TWA reference period): 50 ppm | 220 mg/m³

Short-term exposure limit (15-minute reference period): 100 ppm | 441 mg/m³

Comments: Sk BMGV (Bmgv = Biological Monitoring Guidance Value. Sk = Can be absorbed through skin.)

but-1-en

Long-term exposure limit (8-hour TWA reference period): 600 ppm | 1450 mg/m³

Short-term exposure limit (15-minute reference period): 750 ppm | 1810 mg/m³

Comments: Carc (>0,1%butadien) (Carc = Capable of causing cancer.)

DNEL / PNEC

DNEL (xylene, blending af isomerer, kemisk rent): 289 mg/m³

Exposure: Inhalation
 Duration of Exposure: Short term – Local effects - Workers

DNEL (xylen, blanding af isomerer, kemisk rent): 180 mg/kg bw/day
 Exposure: Dermal
 Duration of Exposure: Long term – Systemic effects - Workers

DNEL (xylen, blanding af isomerer, kemisk rent): 77 mg/m3
 Exposure: Inhalation
 Duration of Exposure: Long term – Systemic effects - Workers

DNEL (xylen, blanding af isomerer, kemisk rent): 174 mg/m3
 Exposure: Inhalation
 Duration of Exposure: Short term – Local effects - General population

DNEL (xylen, blanding af isomerer, kemisk rent): 14,8 mg/m3
 Exposure: Inhalation
 Duration of Exposure: Long term – Systemic effects - General population

DNEL (xylen, blanding af isomerer, kemisk rent): 108 mg/kg bw/day
 Exposure: Dermal
 Duration of Exposure: Long term – Systemic effects - General population

8.2. Exposure controls

▼ Compliance with the accepted occupational exposure limits values should be controlled on a regular basis.

General recommendations

Observe general occupational hygiene standards.

Exposure scenarios

In the event exposure scenarios are appended to the safety data sheet, the operational conditions and risk management measures in these shall be complied with.

▼ Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

▼ Appropriate technical measures

Airborne gas and dust concentrations must be kept at a minimum and below current limit values (see above). Installation of an exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure emergency eyewash and -showers are clearly marked.

Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Always wash hands, forearms and face.

▼ Measures to avoid environmental exposure

Keep containment materials near the workplace. If possible, collect spillage during work.

Individual protection measures, such as personal protective equipment



Generally

Use only CE marked protective equipment.

Respiratory Equipment

Recommended: AX. Brown

Skin protection

Wear appropriate protection clothing, e.g. coveralls in polypropylene approved type 6 and Category III.

Hand protection

Recommended: Nitrile rubber

Eye protection

Wear safety glasses with side shields.

SECTION 9: Physical and chemical properties

▼ 9.1. Information on basic physical and chemical properties

Form	Aerosol
Colour	Gray
Odour	Characteristic
Odour threshold (ppm)	No data available.
pH	No data available.
Viscosity (40°C)	No data available.
Density (g/cm ³)	No data available.
Phase changes	
Melting point (°C)	No data available.
Boiling point (°C)	No data available.
Vapour pressure	No data available.
Decomposition temperature (°C)	No data available.
Evaporation rate (n-butylacetate = 100)	No data available.
Data on fire and explosion hazards	
Flash point (°C)	-25
Ignition (°C)	No data available.
Auto flammability (°C)	No data available.
Explosion limits (% v/v)	No data available.
Explosive properties	No data available.
Solubility	
Solubility in water	Insoluble
n-octanol/water coefficient	No data available.
9.2. Other information	
Solubility in fat (g/L)	No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

The product is stable under the conditions, noted in the section "Handling and storage".

▼ 10.3. Possibility of hazardous reactions

Nothing special

▼ 10.4. Conditions to avoid

Avoid static electricity. Do not expose to any forms of heat (e.g. solar radiation). May lead to excess pressure.

10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

▼ Acute toxicity

Substance: xylen, blanding af isomerer, kemisk rent

Species: Rabbit

Test: LD50

Route of exposure: Dermal

Result: >1100 mg/kg

Substance: xylen, blanding af isomerer, kemisk rent

Species: Rat

Test: LD50

Route of exposure: Oral

Result: 4300 mg/kg

Substance: xylen, blanding af isomerer, kemisk rent

Species: Rat

Test: LC50

Route of exposure: Inhalation

Result: 5000 ppm(4hours)

▼ Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/irritation

No data available.

Respiratory or skin sensitisation

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

No data available.

Reproductive toxicity

No data available.

STOT-single exposure

No data available.

STOT-repeated exposure

No data available.

Aspiration hazard

No data available.

Long term effects

Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

SECTION 12: Ecological information

▼ **12.1. Toxicity**

Substance: 2-methylbutan
 Species: Fish
 Test: LC50
 Duration: 96 h
 Result: 12,8mg/l

Substance: 2-methylbutan
 Species: Daphnia
 Test: EC50
 Duration: 48 h
 Result: 2,3 mg/l

Substance: xylen, blanding af isomerer, kemisk rent
 Species: Fish
 Test: LC50
 Duration: 96 h
 Result: 13,5 mg/l

Substance: xylen, blanding af isomerer, kemisk rent
 Species: Algae
 Test: EC50
 Duration: 72 h
 Result: 3,2 mg/l

Substance: xylen, blanding af isomerer, kemisk rent
 Species: Daphnia
 Test: EC50
 Duration: 48 h
 Result: 3,2 mg/l

Substance: isobutan
 Species: Algae
 Test: EC50
 Duration: 72 h
 Result: 8,6 mg/l

Substance: isobutan
 Species: Daphnia
 Test: EC50
 Duration: 48 h
 Result: 16,3 mg/l

Substance: isobutan
 Species: Fish
 Test: LC50
 Duration: 96 h
 Result: 28 mg/kg

▼ 12.2. Persistence and degradability

Substance	Biodegradability	Test	Result
2-methylbutan	Yes	No data available	71,43%
xylen, blanding af isomerer, k...	Yes	Manometric Respirometry Test	87,8%
isobutan	Yes	No data available	No data available

▼ 12.3. Bioaccumulative potential

Substance	Potential bioaccumulation	LogPow	BCF
2-methylbutan	No	No data available	No data available
xylen, blanding af isomerer, k...	Yes	3,16	No data available
isobutan	No	No data available	No data available

▼ 12.4. Mobility in soil

xylen, blanding af isomerer, k...: Log Koc= 2,580804, Calculated from LogPow (Moderate mobility potential.).

▼ 12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

▼ 12.6. Other adverse effects

This product contains substances that are toxic to the environment. May result in adverse effects to aquatic organisms.

This product contains substances, which due to poor biodegradability, may cause adverse long-term effects to the aquatic environment,

This product contains substances with the potential of bioaccumulation resulting in the risk of accumulation in the food chain. Bioaccumulative substances are concentrated in adipose tissue and are not easily secreted.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product is covered by the regulations on hazardous waste.

Waste

EWC code

16.05.05

Specific labelling

-

▼ Contaminated packing

Contaminated packaging must be disposed of similarly to the product.

SECTION 14: Transport information

14.1 – 14.4

This product is within scope of the regulations of transport of dangerous goods.

ADR/RID

14.1. UN number 1950

14.2. UN proper shipping name -

14.3. Transport hazard class(es) 2.1

14.4. Packing group -

Notes -

Tunnel restriction code -

IMDG

UN-no. 1950

Proper Shipping Name Aerosols

Class 2.1

PG* -

EmS F-D, S-U

MP** Yes

Hazardous constituent	-
IATA/CAO	
UN-no.	1950
Proper Shipping Name	Aerosols
Class	2.1
PG*	-

14.5. Environmental hazards

This product contains substances, which due to poor biodegradability, may cause adverse long-term effects to the aquatic environment,

14.6. Special precautions for user

-

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

No data available

(*) Packing group

(**) Marine pollutant

SECTION 15: Regulatory information

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

Restrictions for application

People under the age of 18 shall not be exposed to this product cf. Council Directive 94/33/EC of 22 June 1994 on the protection of young people at work.

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

Demands for specific education

-

Additional information

Not applicable

Seveso

Seveso III Part 1: P3a, E1

Sources

Council Directive 92/85/EEC on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding.

Council Directive 94/33/EC of 22 June 1994 on the protection of young people at work.

Council Directive 75/324/EEC of 20 May 1975 on the approximation of the laws of the Member States relating to aerosol dispensers.

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677. The Stationery Office, 2002.

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (CLP).

EC regulation 1907/2006 (REACH).

The Control of Major Accident Hazards (COMAH) Regulations 2015.

15.2. Chemical safety assessment

No

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

H220 - Extremely flammable gas.

H224 - Extremely flammable liquid and vapour.

H225 - Highly 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.

H332 - Harmful if inhaled.

- 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.

The full text of identified uses as mentioned in section 1

- PC14 = Metal surface treatment products, including galvanic and electroplating products,
- PROC 11 = Non industrial spraying
- SU 10 = Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
- SU 22 = Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
- ERC2 = Formulation of preparations
- AC7 = Metal articles

Additional label elements



Other

In accordance with Regulation (EC) No. 1272/2008 (CLP) the evaluation of the classification of the mixture is based on:

- The classification of the mixture in regard of physical hazards has been based on experimental data.
- The classification of the mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP)
- The classification of the mixture in regard of environmental hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP)

The classification of the mixture in regard of skin corrosion and serious eye damage is based on the pH-criterion given by Regulation (EC) No. 1272/2008 (CLP) It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.

The safety data sheet is validated by

KAO

**Date of last essential change
(First cipher in SDS version)**

2017-01-17(4.0)

**Date of last minor change
(Last cipher in SDS version)**

2017-01-17