

**Alu-Zinc Spray****1. Identification of the substance/preparation and of the company/undertaking**

- 1.1 Identification of the substance or preparation:**  
Productname : Alu-Zinc Spray
- 1.2 Use of the substance/preparation:**  
Primer
- 1.3 Company/undertaking identification:**  
SODAL N.V.  
Everdongenlaan 18-20  
B-2300 Turnhout  
Tel: +32 14 42 42 31  
Fax: +32 14 44 39 71  
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- 1.4 Emergency telephone:**  
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Technische Schoolstraat 43 A, B-2440 Geel, Belgium

**2. Hazards identification**

- Extremely flammable
- Irritating to eyes
- Repeated exposure may cause skin dryness or cracking
- Vapours may cause drowsiness and dizziness
- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
- Aerosol may explode under the effect of heat

# Alu-Zinc Spray

## 3. Composition/information on ingredients

Hazardous ingredients	CAS No. EINECS/ELINCS No.	Conc. (%)	Hazards (R-phrases)	Hazard symbol
dimethyl ether	115-10-6 204-065-8	25 - <50	12 (1)(2)	F+
acetone	67-64-1 200-662-2	20 - <25	11-36-66-67 (1)(2)	F;Xi
low boiling point naphtha, unspecified (conc benzene <0.1%)	64742-95-6 265-199-0	2.5 - <20	10-37-51/53-65-66-67 (1) (Labelling in compliance with CONCAWE)	Xn;N
zinc powder - zinc dust (stabilized)	7440-66-6 231-175-3	2.5 - <25	50/53 (1)	N
xylene, mixture of isomers	1330-20-7 215-535-7	1 - <12.5	10-20/21-38 (1)(2)	Xn
aluminium powder (stabilized)	7429-90-5 231-072-3	5 - <10	11-15 (1)(2)	F

(1) For R-phrases in full: see heading 16  
(2) Substance with a Community workplace exposure limit  
(3) PBT-substance

## 4. First aid measures

### 4.1 After inhalation:

- Remove the victim into fresh air
- Respiratory difficulties: consult a doctor/medical service

### 4.2 Skin contact:

- Rinse immediately with plenty of water
- Soap may be used
- Take victim to a doctor if irritation persists

### 4.3 Eye contact:

- Rinse immediately with plenty of water
- Do not apply neutralizing agents
- Take victim to an ophthalmologist if irritation persists

### 4.4 After ingestion:

- Rinse mouth with water
- Immediately after ingestion: give lots of water to drink
- If you feel unwell: consult a doctor/medical service

# Alu-Zinc Spray

## 5. Fire-fighting measures

- 5.1 Suitable extinguishing media:**
- Water spray
  - Alcohol-resistant foam
  - BC powder
  - Carbon dioxide
- 5.2 Unsuitable extinguishing media:**
- Solid water jet ineffective as extinguishing medium
- 5.3 Special exposure hazards:**
- Gas/vapour spreads at floor level: ignition hazard
  - Gas/vapour flammable with air within explosion limits
  - Upon combustion CO and CO2 are formed and formation of metallic fumes
- 5.4 Instructions:**
- Cool closed containers with water if they are exposed to the fire
  - Dilute toxic gases with water spray
  - Take account of environmentally hazardous fire-fighting water
- 5.5 Special protective equipment for firefighters:**
- Heat/fire exposure: compressed air/oxygen apparatus
  - Protective clothing

## 6. Accidental release measures

- 6.1 Personal precautions:**
- See heading 8.2
- 6.2 Environmental precautions:**
- Use appropriate containment to avoid environmental contamination
  - Dam up the liquid spill
  - See heading 13
- 6.3 Methods for cleaning up:**
- Take up liquid spill into absorbent material e.g. sand/earth
  - Shovel absorbed substance in closing drums
  - Carefully collect the spill/leftovers
  - Clean contaminated surfaces with an excess of water
  - Take collected spill to manufacturer/competent authority
  - Wash clothing and equipment after handling

## 7. Handling and storage

- 7.1 Handling:**
- Observe normal hygiene standards
  - Use spark-/explosionproof appliances and lighting system
  - Take precautionary measures against static discharges
  - Remove contaminated clothing immediately
  - Clean contaminated clothing

- 7.2 Storage:**
- Keep out of direct sunlight
  - Store in a cool area
  - Store in a dry area
  - Ventilation at floor level
- Keep away from: heat sources, ignition sources

<b>Storage temperature</b>	: < 50	°C
<b>Quantity limit</b>	: N.D.	kg
<b>Storage life</b>	: N.D.	days
<b>Materials for packaging</b>	:	
- suitable	: aerosol dispenser	

- 7.3 Specific use(s):**
- See information supplied by the manufacturer for the identified use(s)

# Alu-Zinc Spray

## 8. Exposure controls/Personal protection

### 8.1 Exposure limit values:

#### 8.1.1 Occupational exposure:

DIMETHYL ETHER:

WEL-LTEL	: 766	mg/m <sup>3</sup>	400	ppm
WEL-STEL	: 958	mg/m <sup>3</sup>	500	ppm
TRGS 900	: 1900	mg/m <sup>3</sup>	1000	ppm
MAK	: 1900	mg/m <sup>3</sup>	1000	ppm
GWBNL-TGG 8 h	: 950	mg/m <sup>3</sup>	(wettelijk)	
GWKNL-TGG 15 min.	: 1500	mg/m <sup>3</sup>		
VME-8 h	: 1920	mg/m <sup>3</sup>	1000	ppm
VLE-15 min.	: -	mg/m <sup>3</sup>	-	ppm
GWBB-8 h	: 1920	mg/m <sup>3</sup>	1000	ppm
GWK-15 min.	: -	mg/m <sup>3</sup>	-	ppm
EC	: 1920	mg/m <sup>3</sup>	1000	ppm
EC-STEL	: -	mg/m <sup>3</sup>	-	ppm

ACETONE:

TLV-TWA	:	mg/m <sup>3</sup>	500	ppm
TLV-STEL	:	mg/m <sup>3</sup>	750	ppm
WEL-LTEL	: 1210	mg/m <sup>3</sup>	500	ppm
WEL-STEL	: 3620	mg/m <sup>3</sup>	1500	ppm
TRGS 900	: 1200	mg/m <sup>3</sup>	500	ppm
MAK	: 1200	mg/m <sup>3</sup>	500	ppm
GWBNL-TGG 8 h	: 1210	mg/m <sup>3</sup>	(wettelijk)	
GWKNL-TGG 15 min.	: 2420	mg/m <sup>3</sup>		
VME-8 h	: 1210	mg/m <sup>3</sup>	500	ppm
VLE-15 min.	: 2420	mg/m <sup>3</sup>	1000	ppm
GWBB-8 h	: 1210	mg/m <sup>3</sup>	500	ppm
GWK-15 min.	: 2420	mg/m <sup>3</sup>	1000	ppm
EC	: 1210	mg/m <sup>3</sup>	500	ppm
EC-STEL	: -	mg/m <sup>3</sup>	-	ppm

XYLENE, mixture of isomers:

TLV-TWA	:	mg/m <sup>3</sup>	100	ppm
TLV-STEL	:	mg/m <sup>3</sup>	150	ppm
WEL-LTEL	: 220	mg/m <sup>3</sup>	50	ppm
WEL-STEL	: 441	mg/m <sup>3</sup>	100	ppm
TRGS 900	: 440	mg/m <sup>3</sup>	100	ppm
MAK	: 440	mg/m <sup>3</sup>	100	ppm
GWBNL-TGG 8 h	: 210	mg/m <sup>3</sup>	(wettelijk)	
GWKNL-TGG 15 min.	: 442	mg/m <sup>3</sup>		
VME-8 h	: 221	mg/m <sup>3</sup>	50	ppm
VLE-15 min.	: 442	mg/m <sup>3</sup>	100	ppm
GWBB-8 h	: 221	mg/m <sup>3</sup>	50	ppm
GWK-15 min.	: 442	mg/m <sup>3</sup>	100	ppm
EC	: 221	mg/m <sup>3</sup>	50	ppm
EC-STEL	: 442	mg/m <sup>3</sup>	100	ppm

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ALUMINIUM POWDER (stabilized):

TLV-TWA	: 1 R	mg/m <sup>3</sup>	ppm
TLV-STEL	: -	mg/m <sup>3</sup>	ppm
WEL-LTEL	: 4 R/10 I	mg/m <sup>3</sup>	ppm
WEL-STEL	: -	mg/m <sup>3</sup>	ppm
MAK	: 1.5 A/4 E	mg/m <sup>3</sup>	ppm
GWBNL-TGG 8 h	: 10	mg/m <sup>3</sup>	(indicatief)
VME-8 h	: 5 fu/10 p	mg/m <sup>3</sup>	ppm
VLE-15 min.	: -	mg/m <sup>3</sup>	ppm
GWBB-8 h	: 10	mg/m <sup>3</sup>	ppm
GWK-15 min.	: -	mg/m <sup>3</sup>	ppm

## 8.1.2 Sampling methods:

- Acetone	OSHA 69
- Acetone	OSHA CSI
- Acetone (ketones 1)	NIOSH 1300
- Acetone (organic and inorganic gases by Extractive FTIR)	NIOSH 3800
- Acetone (Volatile Organic 1671 1671 compounds)	NIOSH 2549
- Aluminum (as Al), Metal (Respirable Fraction)	OSHA CSI
- Aluminum (as Al), Metal (Total Dust)	OSHA CSI
- Aluminum (as Al), Soluble Salts	OSHA CSI
- Aluminum (Elements, aqua regia ashing)	NIOSH 7301
- Aluminum (Elements, hot block/HCL/HNO3 digestion)	NIOSH 7303
- cadmium (Cd)	NIOSH 8005
- Methyl ether	OSHA CSI
- Petroleum Distillate (Naphthas)	NIOSH 1550
- Petroleum Distillates fractions	OSHA 48
- Xylenes	OSHA CSI
- Xylene (Hydrocarbons, aromatic)	NIOSH 1501
- Xylene (o-, m-, & p-isomers)	OSHA 7
- Xylenes (Volatile Organic 1671 1671 compounds)	NIOSH 2549
- Zinc	OSHA ID 121
- Zinc	OSHA ID 125G
- Zinc (Zn)	NIOSH 8310
- Zinc Oxide	NIOSH 7502

## 8.2 Exposure controls:

### 8.2.1 Occupational exposure controls:

- Measure the concentration in the air regularly

#### Personal protective equipment:

- a) **Respiratory protection:**
  - Gas mask with filter type A at conc. in air > exposure limit
- b) **Hand protection:**
  - Gloves
- c) **Eye protection:**
  - Protective goggles
- d) **Skin protection:**
  - Protective clothing

### 8.2.2 Environmental exposure controls: see heading 6.2, 6.3 and 13

# Alu-Zinc Spray

## 9. Physical and chemical properties

### 9.1 General information:

Appearance (at 20°C) : Aerosol  
Odour : Characteristic  
Colour : Variable in colour

### 9.2 Important health, safety and environmental information:

pH value (at 20°C) : N.D.  
Boiling point/boiling range : N.D. °C  
Flashpoint/flammability : Contains extremely flammable component  
Explosion limits (explosive properties) : 0.7 - 18.6 vol%  
Oxidising properties : N.D.  
Vapour pressure (at 20°C) : 4000 hPa  
Vapour pressure (at 50°C) : N.D. hPa  
Relative density liquid phase (20°C) : 0.87  
Solubility liquid phase : Poorly soluble  
Soluble in : No data available  
Relative vapour density : > 1  
Viscosity (at °C) : N.D. Pa.s  
Partition coefficient n-octanol/water : N.D.  
Evaporation rate  
ratio to butyl acetate : N.D.  
ratio to ether : N.D.

### 9.3 Other information:

Melting point/melting range : N.D. °C  
Auto-ignition point : 235 °C  
Saturation concentration : N.D. g/m<sup>3</sup>  
Specific conductivity : N.D. pS/m

## 10. Stability and reactivity

### 10.1 Conditions to avoid:

- Stable under normal conditions

### 10.2 Materials to avoid:

- Keep away from: heat sources, ignition sources

### 10.3 Hazardous decomposition products:

- Upon combustion CO and CO<sub>2</sub> are formed and formation of metallic fumes

## 11. Toxicological information

### 11.1 Acute toxicity:

DIMETHYL ETHER:

LC50 inhalation rat : 309 mg/l/4 h  
LC50 inhalation rat : 163991 ppm/4 h

ACETONE:

LD50 oral rat : 5800 mg/kg  
LD50 dermal rabbit : 20000 mg/kg  
LC50 inhalation rat : 71 mg/l/4 h  
LC50 inhalation rat : 30000 ppm/4 h

XYLENE, mixture of isomers:

LD50 oral rat : > 3608 mg/kg

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### 11.2 Chronic toxicity:

DIMETHYL ETHER:

**Teratogenicity (MAK) : Group D**

ACETONE:

**Carcinogenicity (TLV) : A4**

**Teratogenicity (MAK) : Group D**

Low boiling point NAPHTHA, unspecified:

**Carcinogenicity (MAC) : K**

XYLENE, mixture of isomers:

**Carcinogenicity (TLV) : A4**

**Teratogenicity (MAK) : Group D**

**IARC classification : 3**

ALUMINIUM POWDER (stabilized):

**Carcinogenicity (TLV) : A4**

**Teratogenicity (MAK) : Group D**

**11.3 Routes of exposure:** inhalation, eyes and skin

### 11.4 Acute effects/symptoms:

#### **AFTER INHALATION:**

EXPOSURE TO HIGH CONCENTRATIONS:

- Feeling of weakness
- Irritation of the respiratory tract
- Nausea
- Vomiting
- Headache
- CNS depression
- Dizziness
- Narcosis
- Excited/restless
- Drunkenness
- Disturbed motor response
- Respiratory difficulties
- Disturbances of consciousness

#### **AFTER SKIN CONTACT:**

ON CONTINUOUS EXPOSURE/CONTACT:

- Dry skin
- Cracking of the skin

#### **AFTER EYE CONTACT:**

- Irritation of the eye tissue

### 11.5 Chronic effects:

- Not listed in carcinogenicity class (IARC,EC,TLV,MAK)
- Not listed in mutagenicity class (EC,MAK)
- Not classified as toxic to reproduction (EC)

## 12. Ecological information

### 12.1 Ecotoxicity:

DIMETHYL ETHER:

- LC50 (96 h) : >1000 mg/l (PISCES)
- LC50 (48 h) : >4400 mg/l (DAPHNIA MAGNA)

ACETONE:

- LC50 (96 h) : 5540 mg/l (SALMO GAIRDNERI/ ONCORHYNCHUS MYKISS)
- EC50 (48 h) : 39 mg/l (DAPHNIA MAGNA)
- EC50 (96 h) : 7000 mg/l (SELENASTRUM CAPRICORNUTUM)

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## ZINC POWDER - zinc dust (stabilized):

- LC50 (96 h) : 0.14 mg/l (SALMO GAIRDNERI/ ONCORHYNCHUS MYKISS)
- EC50 (48 h) : 0.07 mg/l (DAPHNIA MAGNA)
- EC50 (96 h) : 0.03 mg/l (SELENASTRUM CAPRICORNUTUM)

## XYLENE, mixture of isomers:

- LC50 (96 h) : 3.77 mg/l (SALMO GAIRDNERI/ ONCORHYNCHUS MYKISS)
- EC50 (48 h) : 7.4 mg/l (DAPHNIA MAGNA)
- EC50 (72 h) : 10 mg/l (SKELETONEMA COSTATUM)

- Effect on waste water purification : No data available

## 12.2 Mobility:

- Volatile organic compounds (VOC): 79%
- Poorly soluble in water

For other physicochemical properties see heading 9

## 12.3 Persistence and degradability:

- Biodegradation BOD<sub>5</sub> : N.D. % ThOD
- Water : No data available
- Soil : T ½ N.D. days

## 12.4 Bioaccumulative potential:

- log P<sub>ow</sub> : N.D.
- BCF : N.D.

## 12.5 Results of PBT assessment:

- Not applicable, on the basis of the available data.

## 12.6 Other adverse effects:

- WGK : 2 (Classification based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 17 May 1999)
- Effect on the ozone layer : Not dangerous for the ozone layer (1999/45/EC)
- Greenhouse effect : No data available

## 13. Disposal considerations

### 13.1 Provisions relating to waste:

- Waste material code (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 08 01 11\* (waste paint and varnish containing organic solvents or other dangerous substances)
- LWCA (the Netherlands): KGA category 06
- Hazardous waste (91/689/EEC)
- Remove waste in accordance with local and/or national regulations

### 13.2 Disposal methods:

- Recycle/reuse
- Should not be landfilled with household waste
- Specific treatment
- Do not discharge into drains or the environment

### 13.3 Packaging:

- Waste material code packaging (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 15 01 10\* (packaging containing residues of or contaminated by dangerous substances)



## 14. Transport information

### 14.1 Classification of the substance in compliance with UN Recommendations

UN number : 1950  
CLASS : 2.1  
SUB RISKS : -  
PACKING GROUP : -

### 14.2 ADR (transport by road)

CLASS : 2  
PACKING GROUP :  
CLASSIFICATION CODE : 5F  
DANGER LABEL TANKS : -  
DANGER LABEL PACKAGES : 2.1  
PROPER SHIPPING NAME :  
Aerosols

### 14.3 RID (transport by rail)

CLASS : 2  
PACKING GROUP :  
CLASSIFICATION CODE : 5F  
DANGER LABEL TANKS : -  
DANGER LABEL PACKAGES : 2.1  
PROPER SHIPPING NAME :  
Aerosols

### 14.4 ADNR (transport by inland waterways)

CLASS : 2  
PACKING GROUP :  
CLASSIFICATION CODE : 5F  
DANGER LABEL TANKS : -  
DANGER LABEL PACKAGES : 2.1

### 14.5 IMDG (maritime transport)

CLASS : 2.1  
SUB RISKS : -  
PACKING GROUP : -  
MFIAG : -  
EMS : F-D, S-U  
MARINE POLLUTANT : P

### 14.6 ICAO (air freight)

CLASS : 2.1  
SUB RISKS : -  
PACKING GROUP : -  
PACKING INSTRUCTIONS PASSENGER AIRCRAFT : 203/Y203  
PACKING INSTRUCTIONS CARGO AIRCRAFT : 203

### 14.7 Special precautions

: None

### 14.8 Limited quantities (LQ)

:

When substances and their packaging meet the conditions established by ADR/RID/ADNR in chapter 3.4, only the following prescriptions shall be complied with:

each package shall display a diamond-shaped figure with the following inscription:

- 'UN 1950'

or, in the case of different goods with different identification numbers within a single package:

- the letters 'LQ'

# Alu-Zinc Spray

## 15. Regulatory information

### 15.1 EU Legislation:

Labelling in accordance with EC directives 67/548/EEC, 1999/45/EC and 2006/8/EC



Extremely flammable



Irritant



Dangerous for the environment

R36	:	Irritating to eyes
R51/53	:	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R66	:	Repeated exposure may cause skin dryness or cracking
R67	:	Vapours may cause drowsiness and dizziness
S23	:	Do not breathe spray
S26	:	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S29/56	:	Do not empty into drains, dispose of this material and its container to hazardous or special waste collection point
S(46)	:	(If swallowed, seek medical advice immediately and show this container or label)
S51	:	Use only in well-ventilated areas
S61	:	Avoid release to the environment. Refer to special instructions/safety data sheets.

Keep away from sources of ignition - No smoking.  
Keep out of the reach of children.  
Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C.  
Do not pierce or burn after use.  
Do not spray on a naked flame or any incandescent material.

### 15.2 National provisions:

**the Netherlands:**  
Waterbezwaarlijkheid: 6

**Germany:**  
WGK : 2 (Classification based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 17 May 1999)

# Alu-Zinc Spray

## 16. Other information

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**N.A.** = NOT APPLICABLE  
**N.D.** = NOT DETERMINED  
**(\*)** = INTERNAL CLASSIFICATION (NFPA)

**PBT-substances** = persistent, bioaccumulative and toxic substances

### Exposure limits:

**TLV** : Threshold Limit Value - ACGIH US  
**WEL** : Workplace Exposure Limits - United Kingdom  
**TRGS 900** : Technische Regel für Gefahrstoffe 900 (Arbeitsplatzgrenzwerte) - Germany  
**MAK** : Maximale Arbeitsplatzkonzentrationen - Germany  
**GWBNL** : Grenswaarde voor blootstelling - the Netherlands  
**GWKNL** : Grenswaarde korte duur - the Netherlands  
**VME** : Valeurs limites de Moyenne d'Exposition - France  
**VLE** : Valeurs limites d'Exposition à court terme - France  
**GWBB** : Grenswaarde beroepsmatige blootstelling - Belgium  
**GWK** : Grenswaarde kortstondige blootstelling - Belgium  
**EC** : Indicative occupational exposure limit values

**I** : Inhalable fraction = **T** : Total dust = **E** : Einatembare Aerosolanteil  
**R** : Respirable fraction = **A** : Alveolengängiger Aerosolanteil/Alveolar dust  
**C** : Ceiling limit

<b>a:</b> aerosol		<b>r:</b> rook/Rauch	(fume)
<b>d:</b> damp	(vapour)	<b>st:</b> stof/Staub	(dust)
<b>du:</b> dust		<b>ve:</b> vezel	(fibre)
<b>fa:</b> Faser	(fibre)	<b>va:</b> vapour	
<b>fi:</b> fibre		<b>om:</b> oil mist	
<b>fu:</b> fume		<b>on:</b> olienevel/Ölnebel	(oil mist)
<b>p:</b> poussière	(dust)	<b>part:</b> particles	

### Chronic toxicity:

**K** : List of the carcinogenic substances and processes - The Netherlands

### Full text of any R-phrases referred to under headings 2 and 3:

R10 : Flammable  
R11 : Highly flammable  
R12 : Extremely flammable  
R15 : Contact with water liberates extremely flammable gases  
R20/21 : Harmful by inhalation and in contact with skin  
R36 : Irritating to eyes  
R37 : Irritating to respiratory system  
R38 : Irritating to skin  
R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment  
R51/53 : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment  
R65 : Harmful: may cause lung damage if swallowed  
R66 : Repeated exposure may cause skin dryness or cracking  
R67 : Vapours may cause drowsiness and dizziness