



## Safety data sheet

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

Printing date 06.02.2025

Version: 4 (replaces version 3)

Revision: 06.02.2025

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

- **1.1 Product identifier**
- **Trade name:** POLYFINISH HS ALUMINIUM
- **Article number:** D60-1
- **UFI:** GF9A-918Q-1004-496P
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use**
  - SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
  - SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
  - SU19 Building and construction work
- **Product category** PC9a Coatings and paints, thinners, paint removers
- **Process category**
  - PROC7 Industrial spraying
  - PROC10 Roller application or brushing
  - PROC19 Manual activities involving hand contact
  - PROC13 Treatment of articles by dipping and pouring
- **Application of the substance / the mixture** solvent based, two component polyurethane coating base
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
  - Zandleven Coatings B.V.
  - Snekertrekweg 57-59, 8912 AA Leeuwarden, Netherlands
  - Tel: +31 58 2129545 Fax: +31 58 2155996
  - E-mail: [info@zandleven.com](mailto:info@zandleven.com) Internet: [www.zandleven.com](http://www.zandleven.com)
- **Further information obtainable from:** R&D department: [sds@zandleven.com](mailto:sds@zandleven.com)
- **1.4 Emergency telephone number:**
  - Nationaal Vergiftigingen Informatie
  - +31 (0)88 755 8000
  - ORFILA (INRS) : + 33 (0)1 45 42 59 59
  - Centres Antipoison et de Toxicovigilance
  - ANGERS: 02 41 48 21 21
  - BORDEAUX: 05 56 96 40 80
  - LILLE: 0800 59 59 59
  - LYON: 04 72 11 69 11
  - MARSEILLE: 04 91 75 25 25
  - NANCY: 03 83 22 50 50
  - PARIS: 01 40 05 48 48
  - STRASBOURG: 03 88 37 37 37
  - TOULOUSE: 05 61 77 74 47
  - Giftnotruf der Charité, Berlin: 030/19240
  - Giftinformationszentrum-Nord der Länder Bremen, Hamburg, Niedersachsen und Schleswig-Holstein (GIZ-Nord) :0551/19 240
  - Informationszentrale gegen Vergiftungen Zentrum für Kinderheilkunde Universitätsklinikum Bonn: 0228/19240
  - Giftnotruf Erfurt Gemeinsames Giftinformationszentrum der Länder Mecklenburg-Vorpommern, Sachsen, Sachsen-Anhalt und Thüringen: 0361/730 730
  - Informations- und Beratungszentrum für Vergiftungsfälle Klinik für Kinder- und Jugendmedizin Universitätsklinikum des Saarlandes: 06841/19240
  - Giftinformationszentrum der Länder Rheinland-Pfalz und Hessen - Klinische Toxikologie - Universitätsmedizin der Johannes Gutenberg-Universität Mainz: 06131/19240
  - Vergiftungs-Informations-Zentrale Zentrum für Kinder- und Jugendmedizin Universitätsklinikum: 0761/19240
  - Giftnotruf München Toxikologische Abteilung der II. Med. Klinik und Poliklinik: 089/19240
- Supplier
- +31 (0)58 2677590 (during office hours)

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
  - Flam. Liq. 3 H226 Flammable liquid and vapour.
  - Skin Sens. 1 H317 May cause an allergic skin reaction.
  - Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

(Contd. on page 2)



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Trade name: POLYFINISH HS ALUMINIUM

(Contd. of page 1)

### 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 Warning

#### Hazard-determining components of labelling:

maleic anhydride  
Octadecanoic acid, 12-hydroxy-, reaction products with hexamethylenediamine  
Fatty acids, C14-18 and C16-18-unsatd., maleated  
n-butyl methacrylate  
2-hydroxyethyl methacrylate

#### Hazard statements

H226 Flammable liquid and vapour.  
H317 May cause an allergic skin reaction.  
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.  
P241 Use explosion-proof [electrical/ventilating/lighting] equipment.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

### 2.3 Other hazards

#### Results of PBT and vPvB assessment

PBT: Not applicable.  
vPvB: Not applicable.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

#### Dangerous components:

Percentages of the components are expressed as a percentage by weight

CAS: 123-86-4 EINECS: 204-658-1 Index number: 607-025-00-1 Reg.nr.: 01-2119485493-29	n-butyl acetate ⚠ Flam. Liq. 3, H226; ⚠ STOT SE 3, H336, EUH066	10-25%
CAS: 1330-20-7 EINECS: 215-535-7 Index number: 601-022-00-9 Reg.nr.: 01-2119488216-32	xylene ⚠ Flam. Liq. 3, H226; ⚠ Asp. Tox. 1, H304; ⚠ Acute Tox. 4, H312; ⚠ Acute Tox. 4, H332; ⚠ Skin Irrit. 2, H315; ⚠ Eye Irrit. 2, H319; ⚠ STOT SE 3, H335	2.5-10%
EC number: 919-857-5 Reg.nr.: 01-2119463258-33	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics ⚠ Flam. Liq. 3, H226; ⚠ Asp. Tox. 1, H304; ⚠ STOT SE 3, H336, EUH066	2.5-10%
CAS: 108-65-6 EINECS: 203-603-9 Index number: 607-195-00-7 Reg.nr.: 01-2119475791-29	2-methoxy-1-methylethyl acetate ⚠ Flam. Liq. 3, H226; ⚠ STOT SE 3, H336	2.5-10%

(Contd. on page 3)



## Safety data sheet

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

Printing date 06.02.2025

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Revision: 06.02.2025

**Trade name: POLYFINISH HS ALUMINIUM**

(Contd. of page 2)

CAS: 128601-23-0 EC number: 918-668-5 Reg.nr.: 01-2119455851-35	C9-aromatics ⚠ Flam. Liq. 3, H226; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ Acute Tox. 4, H312; STOT SE 3, H335-H336, EUH066	1-2.5%
CAS: 100-41-4 EINECS: 202-849-4 Index number: 601-023-00-4 Reg.nr.: 01-2119489370-35	ethylbenzene ⚠ Flam. Liq. 2, H225; ⚠ STOT RE 2, H373; ⚠ Asp. Tox. 1, H304; ⚠ Acute Tox. 4, H332; ⚠ Aquatic Chronic 3, H412	1-2.5%
CAS: 107-98-2 EINECS: 203-539-1 Index number: 603-064-00-3 Reg.nr.: 01-2119457435-35	1-Methoxy-2-propanol ⚠ Flam. Liq. 3, H226; ⚠ STOT SE 3, H336	1-2.5%
	Octadecanoic acid, 12-hydroxy-, reaction products with hexamethylenediamine ⚠ STOT RE 2, H373; ⚠ Skin Sens. 1B, H317; ⚠ Aquatic Chronic 4, H413	<1%
CAS: 85711-46-2 EINECS: 288-306-2 Reg.nr.: 01-2119976378-19	Fatty acids, C14-18 and C16-18-unsatd., maleated ⚠ Skin Irrit. 2, H315; ⚠ Eye Irrit. 2, H319; ⚠ Skin Sens. 1, H317	0-<1%
CAS: 97-88-1 EINECS: 202-615-1 Index number: 607-033-00-5 Reg.nr.: 01-2119486394-28	n-butyl methacrylate ⚠ Flam. Liq. 3, H226; ⚠ Skin Irrit. 2, H315; ⚠ Eye Irrit. 2, H319; ⚠ Skin Sens. 1, H317; STOT SE 3, H335	<1%
CAS: 868-77-9 EINECS: 212-782-2 Index number: 607-124-00-X Reg.nr.: 01-2119490169-29	2-hydroxyethyl methacrylate ⚠ Skin Irrit. 2, H315; ⚠ Eye Irrit. 2, H319; ⚠ Skin Sens. 1, H317	<1%
CAS: 108-31-6 EINECS: 203-571-6 Index number: 607-096-00-9	maleic anhydride ⚠ Resp. Sens. 1, H334; STOT RE 1, H372; ⚠ Skin Corr. 1B, H314; ⚠ Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302; ⚠ Acute Tox. 4, H332; ⚠ Skin Sens. 1A, H317, EUH071 Specific concentration limit: Skin Sens. 1A; H317: C ≥ 0.001 %	0-<1%

**Additional information:**

Note P of Annex 1A (67/548/EEC) applies to the product or one or more of its components (benzene <0.1 wt. %).

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

## SECTION 4: First aid measures

**4.1 Description of first aid measures**

**General information:** Immediately remove any clothing soiled by the product.

**After inhalation:**

Supply fresh air and to be sure call for a doctor.

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

**After skin contact:** Immediately rinse with water.

**After eye contact:** Rinse opened eye for several minutes under running water.

**After swallowing:** If symptoms persist consult doctor.

**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.

## SECTION 5: Firefighting measures

**5.1 Extinguishing media****Suitable extinguishing agents:**

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**For safety reasons unsuitable extinguishing agents:** Water with full jet

**5.2 Special hazards arising from the substance or mixture** No further relevant information available.

(Contd. on page 4)



## Safety data sheet

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

Printing date 06.02.2025

Version: 4 (replaces version 3)

Revision: 06.02.2025

**Trade name: POLYFINISH HS ALUMINIUM**

- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

(Contd. of page 3)

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**  
Do not allow product to reach sewage system or any water course.  
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.
- **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.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Store material in original, well-closed packages in a cool, well-ventilated area according to local regulations.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Recommended storage temperature:** 5 - 30 °C
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

#### 123-86-4 n-butyl acetate

IOELV	Short-term value: 723 mg/m <sup>3</sup> , 150 ppm
	Long-term value: 241 mg/m <sup>3</sup> , 50 ppm

#### 1330-20-7 xylene

IOELV	Short-term value: 442 mg/m <sup>3</sup> , 100 ppm
	Long-term value: 221 mg/m <sup>3</sup> , 50 ppm
	Skin

#### 108-65-6 2-methoxy-1-methylethyl acetate

IOELV	Short-term value: 550 mg/m <sup>3</sup> , 100 ppm
	Long-term value: 275 mg/m <sup>3</sup> , 50 ppm
	Skin

#### 100-41-4 ethylbenzene

IOELV	Short-term value: 884 mg/m <sup>3</sup> , 200 ppm
	Long-term value: 442 mg/m <sup>3</sup> , 100 ppm
	Skin

(Contd. on page 5)



## Safety data sheet

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**Trade name: POLYFINISH HS ALUMINIUM**

(Contd. of page 4)

**107-98-2 1-Methoxy-2-propanol**

IOELV	Short-term value: 568 mg/m <sup>3</sup> , 150 ppm
	Long-term value: 375 mg/m <sup>3</sup> , 100 ppm
	Skin

**· DNEL (Derived No Effect Level) for workers:****123-86-4 n-butyl acetate**

Dermal	Acute - systemic effects, worker	11 mg/kg bw/day (human)
	Long-term - systemic effects, worker	11 mg/kg bw/day (human)
Inhalative	Acute - systemic effects, worker	600 mg/m <sup>3</sup> (human)
	Acute - local effects, worker	600 mg/m <sup>3</sup> (human)
	Long-term - systemic effects, worker	300 mg/m <sup>3</sup> (worker)
	Long-term - local effects, worker	300 mg/m <sup>3</sup> (human)

**1330-20-7 xylene**

Dermal	Long-term - systemic effects, worker	212 mg/kg bw/day (worker)
Inhalative	Acute - systemic effects, worker	442 mg/m <sup>3</sup> (worker)
	Acute - local effects, worker	442 mg/m <sup>3</sup> (worker)
	Long-term - systemic effects, worker	221 mg/m <sup>3</sup> (worker)
	Long-term - local effects, worker	221 mg/m <sup>3</sup> (worker)

**108-65-6 2-methoxy-1-methylethyl acetate**

Dermal	Long-term - systemic effects, worker	153.5 mg/kg bw/day (worker)
Inhalative	Long-term - systemic effects, worker	275 mg/m <sup>3</sup> (worker)

**128601-23-0 C9-aromatics**

Dermal	Long-term - systemic effects, worker	12.5 mg/kg bw/day (human)
Inhalative	Long-term - systemic effects, worker	151 mg/m <sup>3</sup> (human)

**100-41-4 ethylbenzene**

Dermal	Long-term - systemic effects, worker	180 mg/kg bw/day (worker)
Inhalative	Acute - local effects, worker	293 mg/m <sup>3</sup> (worker)
	Long-term - systemic effects, worker	77 mg/m <sup>3</sup> (worker)

**107-98-2 1-Methoxy-2-propanol**

Dermal	Long-term - systemic effects, worker	50.6 mg/kg bw/day (worker)
Inhalative	Acute - local effects, worker	553.5 mg/m <sup>3</sup> (worker)
	Long-term - systemic effects, worker	369 mg/m <sup>3</sup> (worker)

**Octadecanoic acid, 12-hydroxy-, reaction products with hexamethylenediamine**

Dermal	Acute - systemic effects, worker	10 mg/kg bw/day (worker)
	Long-term - systemic effects, worker	10 mg/kg bw/day (worker)
Inhalative	Acute - systemic effects, worker	35.24 mg/m <sup>3</sup> (worker)
	Long-term - systemic effects, worker	35.24 mg/m <sup>3</sup> (worker)

**108-31-6 maleic anhydride**

Inhalative	Acute - systemic effects, worker	0.2 mg/m <sup>3</sup> (worker)
	Acute - local effects, worker	0.2 mg/m <sup>3</sup> (worker)
	Long-term - systemic effects, worker	0.081 mg/m <sup>3</sup> (worker)
	Long-term - local effects, worker	0.081 mg/m <sup>3</sup> (worker)

**· DNEL (Derived No Effect Level) for the general population:****123-86-4 n-butyl acetate**

Oral	Acute - systemic effects, general population	2 mg/kg bw/day (human)
	Long-term - systemic effects, general population	2 mg/kg bw/day (human)
Dermal	Acute - systemic effects, general population	6 mg/kg bw/day (human)
	Long-term - systemic effects, general population	6 mg/kg bw/day (human)
Inhalative	Acute - systemic effects, general population	300 mg/m <sup>3</sup> (general population)
	Acute - local effects, general population	300 mg/m <sup>3</sup> (human)
	Long-term - systemic effects, general population	35.7 mg/m <sup>3</sup> (general population)

(Contd. on page 6)



## Safety data sheet

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

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Revision: 06.02.2025

**Trade name: POLYFINISH HS ALUMINIUM**

(Contd. of page 5)

	Long-term - local effects, general population	35.7 mg/m <sup>3</sup> (human)
<b>1330-20-7 xylene</b>		
Oral	Long-term - systemic effects, general population	12.5 mg/kg bw/day (general population)
Dermal	Long-term - systemic effects, general population	125 mg/kg bw/day (general population)
Inhalative	Acute - systemic effects, general population	260 mg/m <sup>3</sup> (general population)
	Acute - local effects, general population	260 mg/m <sup>3</sup> (general population)
	Long-term - systemic effects, general population	65.3 mg/m <sup>3</sup> (general population)
	Long-term - local effects, general population	65.3 mg/m <sup>3</sup> (general population)
<b>108-65-6 2-methoxy-1-methylethyl acetate</b>		
Oral	Long-term - systemic effects, general population	1.67 mg/kg bw/day (general population)
Dermal	Long-term - systemic effects, general population	54.8 mg/kg bw/day (general population)
Inhalative	Long-term - systemic effects, general population	33 mg/m <sup>3</sup> (general population)
<b>128601-23-0 C9-aromatics</b>		
Oral	Long-term - systemic effects, general population	7.5 mg/kg bw/day (human)
Dermal	Long-term - systemic effects, general population	7.5 mg/kg bw/day (human)
Inhalative	Long-term - systemic effects, general population	32 mg/m <sup>3</sup> (human)
<b>100-41-4 ethylbenzene</b>		
Oral	Long-term - systemic effects, general population	1.6 mg/kg bw/day (general population)
Inhalative	Long-term - systemic effects, general population	15 mg/m <sup>3</sup> (general population)
<b>107-98-2 1-Methoxy-2-propanol</b>		
Oral	Long-term - systemic effects, general population	3.3 mg/kg bw/day (general population)
Dermal	Long-term - systemic effects, general population	18.1 mg/kg bw/day (general population)
Inhalative	Long-term - systemic effects, general population	43.9 mg/m <sup>3</sup> (general population)
<b>Octadecanoic acid, 12-hydroxy-, reaction products with hexamethylenediamine</b>		
Oral	Acute - systemic effects, general population	5 mg/kg bw/day (general population)
	Long-term - systemic effects, general population	5 mg/kg bw/day (general population)
Dermal	Acute - systemic effects, general population	5 mg/kg bw/day (general population)
	Long-term - systemic effects, general population	5 mg/kg bw/day (general population)
Inhalative	Acute - systemic effects, general population	8.69 mg/m <sup>3</sup> (general population)
	Long-term - systemic effects, general population	8.69 mg/m <sup>3</sup> (general population)
<b>· PNEC (Predicted No Effect Concentration) values:</b>		
<b>123-86-4 n-butyl acetate</b>		
Aquatic compartment - freshwater		0.18 mg/L (freshwater)
Aquatic compartment - marine water		0.018 mg/L (marine water)
Aquatic compartment - water, intermittent releases		0.36 mg/L (not specified)
Aquatic compartment - sediment in freshwater		0.981 mg/kg sed dw (not specified)
Aquatic compartment - sediment in marine water		0.0981 mg/kg sed dw (not specified)
Terrestrial compartment - soil		0.0903 mg/kg dw (not specified)
Sewage treatment plant		35.6 mg/L (not specified)
<b>1330-20-7 xylene</b>		
Aquatic compartment - freshwater		0.327 mg/L (freshwater)
Aquatic compartment - marine water		0.327 mg/L (marine water)
Aquatic compartment - water, intermittent releases		0.327 mg/L (intermittent release water)
Aquatic compartment - sediment in freshwater		12.46 mg/kg sed dw (sediment fresh water)
Aquatic compartment - sediment in marine water		12.46 mg/kg sed dw (sediment marine water)
Terrestrial compartment - soil		2.31 mg/kg dw (soil)
Sewage treatment plant		6.58 mg/L (sewage treatment plant)
<b>108-65-6 2-methoxy-1-methylethyl acetate</b>		
Aquatic compartment - freshwater		0.635 mg/L (not specified)
Aquatic compartment - marine water		0.0635 mg/L (not specified)

(Contd. on page 7)





## Safety data sheet

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

Printing date 06.02.2025

Version: 4 (replaces version 3)

Revision: 06.02.2025

**Trade name: POLYFINISH HS ALUMINIUM**

(Contd. of page 6)

Aquatic compartment - water, intermittent releases	6.35 mg/L (not specified)
Aquatic compartment - sediment in freshwater	3.29 mg/kg sed dw (not specified)
Aquatic compartment - sediment in marine water	0.329 mg/kg sed dw (not specified)
Terrestrial compartment - soil	0.29 mg/kg dw (not specified)
Sewage treatment plant	100 mg/L (not specified)
<b>100-41-4 ethylbenzene</b>	
Aquatic compartment - freshwater	0.1 mg/L (not specified)
Aquatic compartment - marine water	0.01 mg/L (not specified)
Aquatic compartment - water, intermittent releases	0.1 mg/L (not specified)
Aquatic compartment - sediment in freshwater	13.7 mg/kg sed dw (not specified)
Aquatic compartment - sediment in marine water	1.37 mg/kg sed dw (not specified)
Terrestrial compartment - soil	2.68 mg/kg dw (not specified)
Sewage treatment plant	9.6 mg/L (not specified)
Oral secondary poisoning	0.02 mg/kg food (not specified)
<b>107-98-2 1-Methoxy-2-propanol</b>	
Aquatic compartment - freshwater	10 mg/L (not specified)
Aquatic compartment - marine water	1 mg/L (not specified)
Aquatic compartment - water, intermittent releases	100 mg/L (not specified)
Aquatic compartment - sediment in freshwater	52.3 mg/kg sed dw (not specified)
Aquatic compartment - sediment in marine water	5.2 mg/kg sed dw (not specified)
Terrestrial compartment - soil	5.49 mg/kg dw (not specified)
Sewage treatment plant	100 mg/L (not specified)
<b>Octadecanoic acid, 12-hydroxy-, reaction products with hexamethylenediamine</b>	
Aquatic compartment - freshwater	0.2 mg/L (freshwater)
Aquatic compartment - marine water	0.02 mg/L (marine water)
Aquatic compartment - water, intermittent releases	0.18 mg/L (intermittent release water)
Aquatic compartment - sediment in freshwater	860 mg/kg sed dw (sediment fresh water)
Aquatic compartment - sediment in marine water	86 mg/kg sed dw (sediment marine water)
Terrestrial compartment - soil	171.5 mg/kg dw (soil)
Sewage treatment plant	10 mg/L (sewage treatment plant)
Oral secondary poisoning	27.8 mg/kg food (food sec poisoning)
<b>108-31-6 maleic anhydride</b>	
Aquatic compartment - freshwater	0.038 mg/L (freshwater)
Aquatic compartment - marine water	0.004 mg/L (marine water)
Aquatic compartment - water, intermittent releases	0.379 mg/L (intermittent release water)
Aquatic compartment - sediment in freshwater	0.296 mg/kg sed dw (sediment fresh water)
Aquatic compartment - sediment in marine water	0.03 mg/kg sed dw (sediment marine water)
Terrestrial compartment - soil	0.037 mg/kg dw (soil)
Sewage treatment plant	44.6 mg/L (sewage treatment plant)

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

· **8.2 Exposure controls**

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

· **Appropriate engineering controls** No further data; see section 7.

· **Individual protection measures, such as personal protective equipment**

· **General protective and hygienic measures:**

Provide readily accessible eye wash stations and safety showers.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

(Contd. on page 8)



## Safety data sheet

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

Printing date 06.02.2025

Version: 4 (replaces version 3)

Revision: 06.02.2025

**Trade name: POLYFINISH HS ALUMINIUM**

(Contd. of page 7)

**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.

Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If

workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

For organic vapors and solvents type of filter A1 or A2, for dust type of filter P (according to EN 140)

**Hand protection**

Protective gloves

Chemical resistant gloves (EN 374)

Check protective gloves prior to each use for their proper condition.

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**

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.

Butyl rubber, BR

**Penetration time of glove material**

KCL Butoject 897/898

breakthrough time 95 min.

thickness: 0,3 / 0,7 mm

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

**Not suitable are gloves made of the following materials:**

Nitrile rubber, NBR

Natural rubber, NR

Neoprene gloves

**Eye/face protection**

Tightly sealed goggles

Safety glasses according to EN 166 or equivalent

**Body protection:**

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved before the product is used by a specialist.

If there is a risk of ignition by static electricity, anti-static protective clothing should be worn. For the best protection against static discharge, clothing should consist of anti-static overalls, boots and gloves.

For further information on materials and design requirements and test methods consult the European standard EN 1149.

**Environmental exposure controls**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

**9.1 Information on basic physical and chemical properties****General Information****Physical state**

Liquid

**Colour:**

According to product specification

(Contd. on page 9)





## Safety data sheet

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

Printing date 06.02.2025

Version: 4 (replaces version 3)

Revision: 06.02.2025

**Trade name: POLYFINISH HS ALUMINIUM**

(Contd. of page 8)

· Odour:	Characteristic
· Odour threshold:	Not determined.
· Melting point/freezing point:	Undetermined.
· Boiling point or initial boiling point and boiling range	124-128 °C (123-86-4 n-butyl acetate)
· Flammability	Flammable.
· Lower and upper explosion limit	
· Lower:	1.2 Vol % (123-86-4 n-butyl acetate)
· Upper:	7.5 Vol % (123-86-4 n-butyl acetate)
· Flash point:	27 °C
· Auto-ignition temperature:	370 °C (123-86-4 n-butyl acetate)
· Decomposition temperature:	Not determined.
· pH	Not determined.
· Viscosity:	
· Kinematic viscosity	at 40 °C: > 20,5 mm <sup>2</sup> /s
· Dynamic at 20 °C:	800 mPas
· Solubility	
· water:	Not miscible or difficult to mix.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure at 20 °C:	10.7 hPa (123-86-4 n-butyl acetate)
· Vapour pressure at 50 °C:	55 hPa
· Density and/or relative density	
· Density at 20 °C:	1.06 g/cm <sup>3</sup>
· Relative density	Not determined.
· Vapour density	Not determined.
<b>9.2 Other information</b>	
· Appearance:	
· Form:	Fluid
· 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 determined.
<b>Information with regard to physical hazard classes</b>	
· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Flammable liquid and vapour.
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· 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

EU

(Contd. on page 10)



## Safety data sheet

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

Printing date 06.02.2025

Version: 4 (replaces version 3)

Revision: 06.02.2025

Trade name: POLYFINISH HS ALUMINIUM

(Contd. of page 9)

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

### SECTION 11: Toxicological information

- **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.

#### · LD/LC50 values relevant for classification:

##### 123-86-4 n-butyl acetate

Oral	LD50	10,760 mg/kg (rat)
Dermal	LD50	>17,600 mg/kg (rabbit)
Inhalative	LC50/4 h	23.4 mg/l (rat)

##### 1330-20-7 xylene

Oral	LD50	3,523 mg/kg (rat)
Dermal	LD50	2,000 mg/kg (rabbit)

##### Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics

Oral	LD50	>5,000 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rab)

##### 108-65-6 2-methoxy-1-methylethyl acetate

Oral	LD50	8,532 mg/kg (rat)
Inhalative	LC50/4 h	35.7 mg/l (rat)

##### 128601-23-0 C9-aromatics

Oral	LD50	5,558-7,093 mg/kg (rat)
Dermal	LD50	2,000-3,160 mg/kg (rabbit)

##### 100-41-4 ethylbenzene

Oral	LD50	3,500 mg/kg (rat)
Dermal	LD50	17,800 mg/kg (rabbit)

##### 107-98-2 1-Methoxy-2-propanol

Oral	LD50	5,660 mg/kg (rat)
Dermal	LD50	13,000 mg/kg (rabbit)

##### 97-88-1 n-butyl methacrylate

Oral	LD50	22,600 mg/kg (rat)
Dermal	LD50	11,300 mg/kg (rabbit)
Inhalative	LC50/4 h	4,910 mg/l (rat)

##### 868-77-9 2-hydroxyethyl methacrylate

Oral	LD50	5,050 mg/kg (rat)
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##### 108-31-6 maleic anhydride

Oral	LD50	1,090 mg/kg (rat)
Dermal	LD50	2,620 mg/kg (rabbit)
Inhalative	LC50/4 h	>4.35 mg/l (mouse)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** May cause an allergic skin reaction.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.

(Contd. on page 11)



## Safety data sheet

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

Printing date 06.02.2025

Version: 4 (replaces version 3)

Revision: 06.02.2025

Trade name: POLYFINISH HS ALUMINIUM

(Contd. of page 10)

- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **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 Information on other hazards**

· <b>Endocrine disrupting properties</b>
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None of the ingredients is listed.
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## SECTION 12: Ecological information

### · 12.1 Toxicity

#### · **Aquatic toxicity:**

##### **123-86-4 n-butyl acetate**

EC50/72 h	647.7 mg/l (algae)
EC50/48 h	44 mg/l (Daphnia magna)
EC50/24 h	335 mg/l (aquatic algae and cyanobacteria)
LC50/96 h	18 mg/l (pimephales promelas)
NOEC 21 days	23.2 mg/l (aquatic invertebrates)

##### **1330-20-7 xylene**

EC50/72 h	2.2 mg/l (algae)
EC50/48 h	>3.4 mg/l (Ceriodaphnia dubia)
LC50/96 h	2.6 mg/l (Oncorhynchus mykiss)
LC50/24 h	1 mg/l (Daphnia magna)

##### **108-65-6 2-methoxy-1-methylethyl acetate**

EC50/48 h	408-500 mg/l (Daphnia magna)
LC50/96 h	100-180 mg/l (Oncorhynchus mykiss)

##### **100-41-4 ethylbenzene**

EC50/72 h	3.6-4.2 mg/l (algae)
EC50/24 h	2.2 mg/l (Daphnia magna)
LC50/96 h	4.2 mg/l (Oncorhynchus mykiss)

##### **107-98-2 1-Methoxy-2-propanol**

EC50/48 h	23,300 mg/l (Daphnia magna)
LC50/96 h	6,812 mg/l (Leuciscus idus)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative 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:**

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

EU

(Contd. on page 12)



## Safety data sheet

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

Printing date 06.02.2025

Version: 4 (replaces version 3)

Revision: 06.02.2025

Trade name: POLYFINISH HS ALUMINIUM

(Contd. of page 11)

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

##### Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

##### European waste catalogue


08 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 01 00	wastes from MFSU and removal of paint and varnish
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances
HP3	Flammable
HP14	Ecotoxic

##### Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

### SECTION 14: Transport information

Transport in accordance with ADR/RID, IMDG and ICAO/IATA.

14.1 UN number or ID number	
ADR/RID/ADN, IMDG	Void
IATA	UN1263
14.2 UN proper shipping name	
ADR/RID/ADN, IMDG	Void
IATA	PAINT
14.3 Transport hazard class(es)	
ADR/RID/ADN, ADN, IMDG	
Class	Void
IATA	
	
Class	3 Flammable liquids.
Label	3
14.4 Packing group	
ADR/RID/ADN, IMDG	Void
IATA	III
14.5 Environmental hazards:	Not applicable.
14.6 Special precautions for user	Not applicable.
14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
Transport/Additional information:	
ADR/RID/ADN	
Remarks:	Up to 450 litre exempted according to ADR 2.2.3.1.5.
IMDG	
Remarks:	Up to 450 litre: Transport in accordance with Packs 2.3.2.5 of the IMDG Code.

(Contd. on page 13)



## Safety data sheet

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

Printing date 06.02.2025

Version: 4 (replaces version 3)

Revision: 06.02.2025

Trade name: POLYFINISH HS ALUMINIUM

(Contd. of page 12)

## · IATA

## · Remarks:

The "viscosity exemption" provisions do NOT apply to air transport.

## · UN "Model Regulation":

Void

### SECTION 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 P5c FLAMMABLE LIQUIDS

· Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t

· Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 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

None of the ingredients is listed.

## · Regulation (EC) No 273/2004 on drug precursors

108-88-3 toluene

3

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

108-88-3 toluene

3

· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

### SECTION 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.

## · Classification according to Regulation (EC) No 1272/2008

The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

· Contact: J. Dijkstra

· Date of previous version: 19.04.2023

· Version number of previous version: 3

## · Abbreviations and acronyms:

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)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Flam. Liq. 3: Flammable liquids – Category 3

Acute Tox. 4: Acute toxicity – Category 4

(Contd. on page 14)

EU



## Safety data sheet

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

Printing date 06.02.2025

Version: 4 (replaces version 3)

Revision: 06.02.2025

**Trade name: POLYFINISH HS ALUMINIUM**

(Contd. of page 13)

Skin Corr. 1B: Skin corrosion/irritation – Category 1B  
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  
Resp. Sens. 1: Respiratory sensitisation – Category 1  
Skin Sens. 1: Skin sensitisation – Category 1  
Skin Sens. 1A: Skin sensitisation – Category 1A  
Skin Sens. 1B: Skin sensitisation – Category 1B  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1  
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2  
Asp. Tox. 1: Aspiration 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  
Aquatic Chronic 4: Hazardous to the aquatic environment - long-term aquatic hazard – Category 4

**Sources**

- ECHA European Chemical Agency - <http://echa.europa.eu/information-on-chemicals>
- SDS of raw materials supplied by producer/supplier.

**\* Data compared to the previous version altered.**

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