

Printing date 01.09.2017 Version number 13 Revision: 01.09.2017

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

- · 1.1 Product identifier
- · Trade name: Epifanes Poly-urethane Clear Gloss Comp. A
- 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)

- Product category PC9a Coatings and paints, thinners, paint removers
- · Process category
 - PROC19 Manual activities involving hand contact
 - PROC10 Roller application or brushing
- · Environmental release category

ERC5 Use at industrial site leading to inclusion into/onto article

ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)

ERC8f Widespread use leading to inclusion into/onto article (outdoor)

- · Article category
 - AC7 Metal articles
 - AC11 Wood articles
 - AC13 Plastic articles
- · Application of the substance / the mixture

See our technical datasheet for application of this product.

base component of a two-component high gloss yacht varnish

- · 1.3 Details of the supplier of the safety data sheet
- Manufacturer/Supplier:
 - W.Heeren & Zoon bv.
 - P.O. box 166
 - 1430 AD Aalsmeer
 - Netherlands
 - tel.+31-(0)297-360366
 - fax +31-(0)297-342078
 - email: r&d@epifanes.nl
- · Further information obtainable from: Research & Development.
- · 1.4 Emergency telephone number:

W.Heeren & Zoon bv. tel: +31 297 360678, E-mail: rend@epifanes.nl

Office hours: weekdays from 08:00 to 17:00.

The National Poisons Information Service; dial 111

Solely intended to inform professionals in acute poisoning!

See manufacturer

SECTION 2: Hazards identification

- · 2.1 Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.

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

- · 2.2 Label elements
- · Labelling according to Regulation (EC) No 1272/2008

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

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· Hazard pictograms



- · Signal word Warning
- · Hazard statements

H226 Flammable liquid and vapour.

H412 Harmful to aquatic life with long lasting effects.

· Precautionary statements

P102 Keep out of reach of children.

P210 Keep away from heat, hot surfaces, sparks, open flames and other

ignition sources. No smoking.

Do not breathe dust/fume/gas/mist/vapours/spray. P260 P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face

protection.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated

clothing. Rinse skin with water/shower.

P501 Dispose of contents/container in accordance with local/regional/

national/international regulations.

- $^{\cdot}$ Additional information: For professional use only.
- · 2.3 Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

- · 3.2 Chemical characterisation: Mixtures
- · Description:

Resin mixture

Solvent mixture with additives

CAS: 108-65-6	2-methoxy-1-methylethyl acetate	10-25%
EINECS: 203-603-9 Index number: 607-195-00-7 Reg.nr.: 01-2119475791-29	♠ Flam. Liq. 3, H226	
CAS: 123-86-4	n-butyl acetate	10-25%
EINECS: 204-658-1	♠ Flam. Liq. 3, H226	
Index number: 607-025-00-1		
Reg.nr.: 01-2119485493-29		
CAS: 64742-95-6	Solvent naphtha (petroleum), light arom.	2.5-10%
EINECS: 265-199-0	♠ Flam. Liq. 3, H226	
Index number: 649-356-00-4	♣ Asp. Tox. 1, H304	
Reg.nr.: 01-2119486773-24	🔥 Aquatic Chronic 2, H411	
	↑ STOT SE 3, H335-H336	

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CAS: 1330-20-7	Xylene	≤2.5
EINECS: 215-535-7 Reg.nr.: 01-2119488216-32	Flam. Liq. 3, H226 STOT RE 2, H373; Asp. Tox. 1, H304 Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	-2.3
CAS: 127519-17-9 ELINCS: 407-000-3 Index number: 607-281-00-4 Reg.nr.: 01-0000015648-61	A mixture of branched and linear C7-C9 alkyl 3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethyl-ethyl)-4-hydroxyphenyl] propionates A partic Chronic 2, H411	≦2.5
CAS: 41556-26-7 EINECS: 255-437-1 Reg.nr.: 01-2119491304-40	bis(1,2,2,6,6-pentamethylL-4-piperidyl) sebacaat Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Skin Sens. 1, H317	≤0.5
CAS: 97-86-9 EINECS: 202-613-0 Index number: 607-113-00-X Reg.nr.: 01-2119488331-38	isobutyl methacrylate Flam. Liq. 3, H226 Aquatic Acute 1, H400 Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	≦0.5
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	<0.3
CAS: 82919-37-7 EINECS: 280-060-7	methyl 1,2,2,6,6-pentamethyl-4- piperidylsebacate Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Skin Sens. 1, H317	<0.3
CAS: 80-62-6 EINECS: 201-297-1 Index number: 607-035-00-6 Reg.nr.: 01-2119452498-28	methyl methacrylate Flam. Liq. 2, H225 Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	<0.3

· Additional information:

Note P: The substance does not have to be classified as a carcinogen or mutagen as can be shown that the substance contains less than 0.1% (w / w) benzene (EINECS No 200-753-7.). This note applies only to certain complex oil-derived substances in Part 3.

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; consult doctor in case of complaints.
- · After skin contact: Immediately rinse with water.
- · After eye contact: Rinse opened eye for several minutes under running water.
- · After swallowing: Seek medical treatment.
- · 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.

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· 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:

CO2, 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

During heating or in case of fire poisonous gases are produced.

- · 5.3 Advice for firefighters
- · Protective equipment:

Wear fully protective suit.

Mouth respiratory protective device.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures Ensure adequate ventilation

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

· 6.2 Environmental precautions:

Prevent seepage into sewage system, workpits and cellars.

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 item 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

Keep away from heat and direct sunlight.

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.

Keep respiratory protective device available.

- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles:

Store only in the original receptacle.

- · Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep container tightly sealed.

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· 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- · Additional information about design of technical facilities: No further data; see item 7.
- · 8.1 Control parameters

· Ingr	edients with limit values that require monitoring at the workplace:
108-	65-6 2-methoxy-1-methylethyl acetate
WEL	Short-term value: 548 mg/m³, 100 ppm Long-term value: 274 mg/m³, 50 ppm Sk
123-	86-4 n-butyl acetate
WEL	Short-term value: 966 mg/m³, 200 ppm Long-term value: 724 mg/m³, 150 ppm
80-6	2-6 methyl methacrylate
WEL	Short-term value: 416 mg/m³, 100 ppm Long-term value: 208 mg/m³, 50 ppm
108-	65-6 2-methoxy-1-methylethyl acetate
WEL	Short-term value: 548 mg/m³, 100 ppm Long-term value: 274 mg/m³, 50 ppm Sk
123-	86-4 n-butyl acetate
WEL	Short-term value: 966 mg/m³, 200 ppm Long-term value: 724 mg/m³, 150 ppm
80-6	2-6 methyl methacrylate
WEL	Short-term value: 416 mg/m³, 100 ppm Long-term value: 208 mg/m³, 50 ppm

- · Additional information: The lists valid during the making were used as basis.
- · 8.2 Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

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.

Filter AX

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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· 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.

· Penetration time of glove material

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

• For the permanent contact gloves made of the following materials are suitable: PE gloves, recommended film thickness:> 0.7 mm.

For a touch of 30-120 minutes: gloves made of PVA, recommended material thickness: 0.7 mm.

As protection from splashes gloves made of the following materials are suitable: (recommended: at least protection index 2, corresponding> 30 minutes permeability time / Permeation according to EN 374)

chloroprene rubber (CR) - 0.5 mm thickness

nitrile rubber (NBR) - 0.4 mm thickness

Gloves of nitrile rubber, recommended material thickness:> 0.3 mm, neoprene or butyl rubber, recommended material thickness:> 0.4 mm.

• Eye protection:



Tightly sealed goggles

SECTION 9: Physical and chemical properties

 \cdot 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Fluid

Colour: According to product specification

146°C

Odour: CharacteristicOdour threshold: Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/freezing point: Undetermined.

Initial boiling point and boiling
range:

. . . .

· Flash point: 42°C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 315°C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

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

mixtures are possible.

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· Explosion limits:		
Lower:	1.2Vol %	
Upper:	10.8Vol %	
Vapour pressure at 20°C:	10.7hPa	
Density at 20°C:	1.07g/cm ³	
Relative density	Not determined.	
Vapour density	Not determined.	
Evaporation rate	Not determined.	
Solubility in / Miscibility with		
water:	Not miscible or difficult to mix.	
Partition coefficient: n-octanol/water	ater: Not determined.	
Viscosity:		
Dynamic:	Not determined.	
Kinematic at 20°C:	40s (DIN 53211/4)	
Solvent content:		
Organic solvents:	44.4%	
VOC content:	44.37%	
	VOC content:	
	474.8 g/l / 3.96 lb/gl	
Solids content:	39.3% (VB% 1h150 C)	
9.2 Other information	No further relevant information available.	

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 toxicological effects
- Acute toxicity Based on available data, the classification criteria are not met.

· LD/LC50 val	· LD/LC50 values relevant for classification:	
108-65-6 2-	108-65-6 2-methoxy-1-methylethyl acetate	
Oral	LD50	8,532 mg/kg bw (rat)
Inhalative	LC50/4 h	35.7 mg/l (rat)
123-86-4 n-	123-86-4 n-butyl acetate	
Oral	LD50	13,100 mg/kg bw (rat)
Dermal	LD50	>5,000 mg/kg bw (rabbit)
Inhalative	LC50/4 h	>21 mg/l (rat)

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64742-95-6	Solvent naphtha	(petroleum), light arom.		
Oral	LD50	3,592 mg/kg (rat)		
Dermal	LD50 (Konijn)	3,160 mg/kg (rabbit)		
Inhalative	LC50 (rat)	$>6,193 \text{ mg/m}^3 \text{ (rat)}$		
97-86-9 iso	97-86-9 isobutyl methacrylate			
Oral	LD50	11,990 mg/kg bw (mouse)		
868-77-9 2-	868-77-9 2-hydroxyethyl methacrylate			
Oral	LD50	5,050 mg/kg bw (rat)		
80-62-6 met	80-62-6 methyl methacrylate			
Oral	LD50	7,872 mg/kg bw (rat)		

- · 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
 - Based on available data, the classification criteria are not met.
- CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- · Germ cell mutagenicity
 - Based on available data, the classification criteria are not met.
- Carcinogenicity
 - Based on available data, the classification criteria are not met.
- · Reproductive toxicity
 - Based on available data, the classification criteria are not met.
- · STOT-single exposure
 - 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.

SECTION 12: Ecological information

- · 12.1 Toxicity
- · Aquatic toxicity:

inquisto contect;		
108-65-6 2-methoxy-1-methylethyl acetate		
EC50	408-500 mg/l (daphnia magna) (48 uur/hour)	
IC 50	>1,000 mg/l (Algae, Growth inhibition test) (72 uur/hour)	
LC50	100-180 mg/l (Fish Acute Toxicity Study) (96 uur/hour)	

- · 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.
- · Ecotoxical effects:
- · Remark: Harmful to fish
- · Additional ecological information:
- General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Harmful to aquatic organisms

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- · 12.5 Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · 12.6 Other adverse effects No further relevant information available.

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*	08 01 11* waste paint and varnish containing organic solvents or other hazardous substances	

- · Uncleaned packaging:
- · Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

- · 14.1 UN-Number
- · ADR, IMDG, IATA UN1263
- · 14.2 UN proper shipping name
- · ADR 1263 PAINT · IMDG, IATA PAINT
- · 14.3 Transport hazard class(es)
- · ADR



- · Class 3 (F1) Flammable liquids.
- · Label
- · IMDG, IATA



- · Class 3 Flammable liquids.
- · Label
- · 14.4 Packing group
- · ADR, IMDG, IATA III
- · 14.5 Environmental hazards:
- · Marine pollutant: No
- \cdot 14.6 Special precautions for user Warning: Flammable liquids.

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Danger code (Kemler):EMS Number:Stowage Category	30 F-E, <u>S-E</u> A
 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code 	
· Transport/Additional information:	
 ADR Limited quantities (LQ) Excepted quantities (EQ) Transport category Tunnel restriction code 	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml 3 D/E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 1263 PAINT, 3, III

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
- $^{\circ}$ 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, 20
- · National regulations:
- · Technical instructions (air):

Class	Share in %
NK	25-50

· Waterhazard class:

Water hazard class 1 (Self-assessment): slightly hazardous for water.

· 15.2 Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

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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.

· Relevant phrases

- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- H304 May be fatal if swallowed and enters airways.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- 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.
- H411 Toxic to aquatic life with long lasting effects.
- Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport 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)

VOC: Volatile Organic Compounds (USA, EU)

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

Skin Irrit. 2: Skin corrosion/irritation - Category 2

Eye Irrit. 2: Serious eye damage/eye irritation - Category 2

Skin Sens. 1: Skin sensitisation - Category 1

STOT SE 3: Specific target organ toxicity (single exposure) - Category 3

STOT RE 2: Specific target organ toxicity (repeated exposure) - Category 2

Asp. Tox. 1: Aspiration hazard - Category 1

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard - Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard - Category 1

Aquatic Chronic 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

* Data compared to the previous version altered.