

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

- 1.1 Product identifier
- Trade name: Epifanes Poly-urethane Yacht Paint Component A (all colours)
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
No further relevant information available.
- Application of the substance / the mixture
base component of a two-component yacht paint
- 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: environment protection department
- 1.4 Emergency telephone number:
W.Heeren & Zoon bv. tel: +31 297 360678, E-mail: r&d@epifanes.nl
Phone the National Poisons Information: Tel. +31 30 2748888
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.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

- Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Xn; Harmful

R20/21: Harmful by inhalation and in contact with skin.



Xi; Irritant

R38: Irritating to skin.

R10-52/53: Flammable. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- Information concerning particular hazards for human and environment:
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- Classification system:
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

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- 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 statements
H226 Flammable liquid and vapour.
H315 Causes skin irritation.
- Precautionary statements
P102 Keep out of reach of children.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
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 or doctor/physician.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/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 Chemical characterization: Mixtures
- Description:
Resin mixture
Solvent mixture with pigment additives

Dangerous components:

CAS: 108-65-6	2-methoxy-1-methylethyl acetate	10-25%
EINECS: 203-603-9	Xi R36	
Index number: 607-195-00-7	R10	
Reg.nr.: 01-2119475791-29	Flam. Liq. 3, H226	

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CAS: 1330-20-7 EINECS: 215-535-7 Index number: 601-022-00-9 Reg.nr.: 01-2119488216-32	xylene Xn R20/21 Xi R38 R10 Flam. Liq. 3, H226 Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	10-25%
CAS: 78-93-3 EINECS: 201-159-0 Index number: 606-002-00-3 Reg.nr.: 01-2119457290-43	butanone Xi R36 F R11 R66-67 Flam. Liq. 2, H225 Eye Irrit. 2, H319; STOT SE 3, H336	≤ 2.5%
CAS: 100-41-4 EINECS: 202-849-4 Index number: 601-023-00-4 Reg.nr.: 01-2119489370-35	ethylbenzene Xn R20 F R11 Flam. Liq. 2, H225 Acute Tox. 4, H332	≤ 2.5%
ELINCS: 400-830-7 Index number: 607-176-00-3 Reg.nr.: 01-2119396032-43	Mixture of alpha-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl-omega-hydroxypoly(oxyethylene) and alpha-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl-omega-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyloxypoly(oxyethylene) Xi R43 N R51/53 Aquatic Chronic 2, H411 Skin Sens. 1, H317	≤0.5%
CAS: 41556-26-7 EINECS: 255-437-1 Reg.nr.: 01-2119491304-40	bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacat Xi R43 N R50/53 Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Skin Sens. 1, H317	≤0.5%

Additional information:

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

SECTION 4: First aid measures

- 4.1 Description of first aid measures
- General information:
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- After inhalation:
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.

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- 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:
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
No further relevant information available.
- 5.3 Advice for firefighters
Protective equipment: Mouth respiratory protective device.

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:
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
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: No special requirements.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep container tightly sealed.
- 7.3 Specific end use(s) No further relevant information available.

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SECTION 8: Exposure controls/personal protection

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

· 8.1 Control parameters

· Ingredients with limit values that require monitoring at the workplace:

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

Inhalative	Tijd gewogen gemiddelde over 8 uur / Exposure time	550 mg/m ³ (Algemene bevolking/ General population)
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1330-20-7 xylene

Inhalative	Tijd gewogen gemiddelde over 15 min/Exposure time	442 mg/m ³ (Algemene bevolking/ General population)
	Tijd gewogen gemiddelde over 8 uur / Exposure time	210 mg/m ³ (Algemene bevolking/ General population)

78-93-3 butanone

Inhalative	Tijd gewogen gemiddelde over 15 min/Exposure time	900 mg/m ³ (Algemene bevolking/ General population)
	Tijd gewogen gemiddelde over 8 uur / Exposure time	590 mg/m ³ (Algemene bevolking/ General population)

100-41-4 ethylbenzene

Inhalative	Tijd gewogen gemiddelde over 15 min/Exposure time	430 mg/m ³ (Algemene bevolking/ General population)
	Tijd gewogen gemiddelde over 8 uur / Exposure time	215 mg/m ³ (Algemene bevolking/ General population)

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

WEL	Short-term value: 548 mg/m ³ , 100 ppm Long-term value: 274 mg/m ³ , 50 ppm Sk
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1330-20-7 xylene	
WEL	Short-term value: 441 mg/m ³ , 100 ppm Long-term value: 220 mg/m ³ , 50 ppm Sk; BMGV
78-93-3 butanone	
WEL	Short-term value: 899 mg/m ³ , 300 ppm Long-term value: 600 mg/m ³ , 200 ppm Sk, BMGV
100-41-4 ethylbenzene	
WEL	Short-term value: 552 mg/m ³ , 125 ppm Long-term value: 441 mg/m ³ , 100 ppm Sk

· DNEs

1330-20-7 xylene		
Dermal	Long-term - local effects, worker	180 --- (Werker/Worker)
Inhalative	Acute - systemic effects, worker	289 mg/m ³ (Werker/Worker)
	Acute-local effects, worker	289 mg/m ³ (Werker/Worker)
	Long-term - local effects, worker	77 mg/m ³ (Werker/Worker)

· PNECs

1330-20-7 xylene	
Aquatic compartment - freshwater	0.327 mg/L (not specified)
Aquatic compartment - marine water	0.327 mg/L (not specified)
Aquatic compartment - sediment in freshwater	12.46 mg/kg sed dw (not specified)
Aquatic compartment - sediment in marine water	12.46 mg/kg sed dw (not specified)
Aquatic compartment - water, intermittent releases	0.327 mg/L (not specified)
Sewage treatment plant	6.58 mg/L (not specified)
Terrestrial compartment - soil	2.31 mg/kg dw (not specified)

· Ingredients with biological limit values:

1330-20-7 xylene	
BMGV	650 mmol/mol creatinine Medium: urine Sampling time: post shift Parameter: methyl hippuric acid
78-93-3 butanone	
BMGV	70 µmol/L Medium: urine Sampling time: post shift Parameter: butan-2-one

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

- 8.2 Exposure controls
- Personal protective equipment:
- General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing

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Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the skin.

Avoid contact with the eyes and skin.

· Respiratory protection:

Filter A/P2

Suitable respiratory protective device recommended.

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.

· 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

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

· Eye protection:



Tightly sealed goggles

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Fluid

Colour: According to product specification

· Odour: Characteristic

· Odour threshold: Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 146 °C

· Flash point: 43 °C

· Flammability (solid, gaseous): Not applicable.

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· Ignition temperature:	315 °C
· Decomposition temperature:	Not determined.
· Self-igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits:	
Lower:	1.1 Vol %
Upper:	10.8 Vol %
· Vapour pressure at 20 °C:	6.7 hPa
· Density at 20 °C:	1.05 g/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):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic at 20 °C:	30 s (ISO 6 mm)
· Solvent content:	
Organic solvents:	40.0 %
VOC content:	40.0 %
	VOC content: 430.9 g/l / 3.60 lb/gl
Solids content:	60.0 % (SC % 1h 150C)
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- 10.1 Reactivity
- 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.

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Trade name: Epifanes Poly-urethane Yacht Paint Component A (all colours)

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SECTION 11: Toxicological information

- 11.1 Information on toxicological effects
- Acute toxicity:

- LD/LC50 values relevant for classification:

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

Oral	LD50	8532 mg/kg bw (rat)
Inhalative	LC50/4 h	35.7 mg/l (rat)

1330-20-7 xylene

Oral	LD50	4300 mg/kg bw (rat)
Dermal	LD50	2000 mg/kg bw (rabbit)

78-93-3 butanone

Oral	LD50	3300 mg/kg bw (rat)
Dermal	LD50	5000 mg/kg bw (rabbit)

100-41-4 ethylbenzene

Oral	LD50	3500 mg/kg bw (rat)
Dermal	LD50	17800 mg/kg bw (rabbit)

- Primary irritant effect:
- on the skin: Irritant to skin and mucous membranes.
- on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.
- Additional toxicological information:
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful
Irritant

SECTION 12: Ecological information

- 12.1 Toxicity

- Aquatic toxicity:

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

EC50	408-500 mg/l (daphnia magna) (48 uur/hour)
IC 50	>1000 mg/l (Algae, Growth inhibition test) (72 uur/hour)
LC50	100-180 mg/l (Fish Acute Toxicity Study) (96 uur/hour)

1330-20-7 xylene

EC50	1 mg/l (daphnia magna) (48 uur/hour)
LC50	13.5-2.6 mg/l (Fish Acute Toxicity Study) (96 uur/hour)

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

1330-20-7 xylene

Log Kow	3 (not specified)
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- 12.4 Mobility in soil No further relevant information available.
- Ecotoxicological effects:
- Remark: Harmful to fish
- Additional ecological information:
- General notes:
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
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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

- 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*	waste paint and varnish containing organic solvents or other dangerous 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
- IMDG, IATA

1263 PAINT (not viscous)
PAINT

- 14.3 Transport hazard class(es)

- ADR



- Class
- Label

3 (F1) Flammable liquids.
3

- IMDG, IATA



- Class
- Label

3 Flammable liquids.
3

- 14.4 Packing group

- ADR, IMDG, IATA

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Trade name: Epifanes Poly-urethane Yacht Paint Component A (all colours)

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- 14.5 Environmental hazards:
- Marine pollutant: No
- 14.6 Special precautions for user Warning: Flammable liquids.
- Danger code (Kemler): 30
- EMS Number: F-E, S-E
- 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.
- Transport/Additional information:
- ADR
- Limited quantities (LQ) 5L
- Excepted quantities (EQ) Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml
- Transport category 3
- Tunnel restriction code D/E
- IMDG
- Limited quantities (LQ) 5L
- Excepted quantities (EQ) Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml
- UN "Model Regulation": UN1263, PAINT (not viscous), 3, III

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- National regulations:
- Technical instructions (air):

Class	Share in %
NK	25-50
- Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.
- 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.

- Relevant phrases
 - H225 Highly flammable liquid and vapour.
 - H226 Flammable liquid and vapour.
 - H312 Harmful in contact with skin.
 - H315 Causes skin irritation.

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Safety data sheet
according to 1907/2006/EC, Article 31

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- H317 May cause an allergic skin reaction.
H319 Causes serious eye 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.
- R10 Flammable.
R11 Highly flammable.
R20 Harmful by inhalation.
R20/21 Harmful by inhalation and in contact with skin.
R36 Irritating to eyes.
R38 Irritating to skin.
R43 May cause sensitisation by skin contact.
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.
R66 Repeated exposure may cause skin dryness or cracking.
R67 Vapours may cause drowsiness and dizziness.

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 Organization
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 Harmonized 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)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Flam. Liq. 2: Flammable liquids, Hazard Category 2
Flam. Liq. 3: Flammable liquids, Hazard Category 3
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

* Data compared to the previous version altered.