

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

- 1.1 Product identifier
- Trade name: Epifanes Mono-Urethane Yacht paint (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 One-component pigmented finish
- 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  
Zie onder Fabrikant/leverancier

**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.

- Classification according to Directive 67/548/EEC or Directive 1999/45/EC  
R10-66: Flammable. Repeated exposure may cause skin dryness or cracking.
- 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.  
At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.
- Classification system:  
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
- 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

- Signal word Warning
- Hazard statements  
H226 Flammable liquid and vapour.

(Contd. on page 2)

Trade name: Epifanes Mono-Urethane Yacht paint (all colours)

(Contd. of page 1)

- 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.
- Additional information:
  - EUH066 Repeated exposure may cause skin dryness or cracking.
  - Contains 2-butanone oxime, carboxylate. May cause an allergic reaction.
- 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: 64742-48-9 EINECS: 265-150-3 Reg.nr.: 01-2119463258-33	naphta (petroleum), hydrotreated heavy Xn R65 R10-66 Flam. Liq. 3, H226 Asp. Tox. 1, H304	25-50%
CAS: 64742-47-8 EINECS: 265-149-8 Index number: 649-422-00-2 Reg.nr.: 01-2119484819-18	Distillates (petroleum), hydrotreated light Xn R65 Flam. Liq. 3, H226 Asp. Tox. 1, H304	2.5-10%
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	≤ 2.5%

(Contd. on page 3)

Trade name: Epifanes Mono-Urethane Yacht paint (all colours)

(Contd. of page 2)

<p>CAS: 96-29-7 EINECS: 202-496-6 Index number: 616-014-00-0 Reg.nr.: 01-2119539477-28</p>	<p>2-butanone oxime   Xn R21-40   Xi R41   Xi R43            Carc. Cat. 3   Carc. 2, H351   Eye Dam. 1, H318   Acute Tox. 4, H312; Skin Sens. 1, H317</p>	<p>≤1%</p>
<p>CAS: 64742-95-6 EINECS: 265-199-0 Reg.nr.: 01-2119486773-24</p>	<p>petroleum, nafta, licht aromatisch   Xn R65   Xi R37   N R51/53            R10-66-67   Flam. Liq. 3, H226   Asp. Tox. 1, H304   Aquatic Chronic 2, H411   STOT SE 3, H335-H336</p>	<p>≤0.5%</p>
<p>CAS: 136-52-7 EINECS: 205-250-6 Reg.nr.: 01-2119524678-29</p>	<p>cobalt bis(2-ethylhexanoate)   Xn R22   N R50/53   Aquatic Acute 1, H400; Aquatic Chronic 1, H410   Acute Tox. 4, H302</p>	<p>≤0.5%</p>

· 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
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- 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  
If swallowed, gastric irrigation with added, activated carbon.

#### 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.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- 5.2 Special hazards arising from the substance or mixture  
Formation of toxic gases is possible during heating or in case of fire.
- 5.3 Advice for firefighters
- Protective equipment: No special measures required.

#### SECTION 6: Accidental release measures

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

(Contd. on page 4)

Trade name: Epifanes Mono-Urethane Yacht paint (all colours)

(Contd. of page 3)

Keep away from ignition sources.

Wear protective equipment. Keep unprotected persons away.

· 6.2 Environmental precautions:

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).

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 only in the original receptacle.

· Information about storage in one common storage facility: Not required.

· Further information about storage conditions:

Store in dry conditions.

Keep container tightly sealed.

· 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

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

1330-20-7 xylene

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

1330-20-7 xylene

WEL Short-term value: 441 mg/m<sup>3</sup>, 100 ppm  
Long-term value: 220 mg/m<sup>3</sup>, 50 ppm  
Sk; BMGV

(Contd. on page 5)

Trade name: Epifanes Mono-Urethane Yacht paint (all colours)

(Contd. of page 4)

· DNEs		
64742-48-9 naphta (petroleum), hydrotreated heavy		
Dermal	Long-term - systemic effects, worker	300 mg/kg bw/day (Werker/Worker)
Inhalative	Long-term - systemic effects, worker	1500 mg/m <sup>3</sup> (Werker/Worker)
1330-20-7 xylene		
Dermal	Long-term - local effects, worker	180 --- (Werker/Worker)
Inhalative	Acute - systemic effects, worker	289 mg/m <sup>3</sup> (Werker/Worker)
	Acute-local effects, worker	289 mg/m <sup>3</sup> (Werker/Worker)
	Long-term - local effects, worker	77 mg/m <sup>3</sup> (Werker/Worker)
96-29-7 2-butanone oxime		
Inhalative	Acute - systemic effects, worker	320-1000 mg/m <sup>3</sup> (Fish Acute Toxicity Study)

· PNECs		
1330-20-7 xylene		
Aquatic comparment - 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 comparment - 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	

- Additional information: The lists valid during the making were used as basis.
- 8.2 Exposure controls
- Personal protective equipment:
- General protective and hygienic measures:  
Wash hands before breaks and at the end of work.  
Do not inhale gases / fumes / aerosols.
- 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.
- Protection of hands:



Protective gloves

(Contd. on page 6)

Trade name: Epifanes Mono-Urethane Yacht paint (all colours)

(Contd. of page 5)

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

Nitrilrubber; handglove thickness >0.45mm, penetrationtime >480min. according EN374.

PVA, Fluorised rubber; handglove thickness >0.45mm, penetrationtime >480min. according EN347.

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

· As protection from splashes gloves made of the following materials are suitable:

Cloropene; handglove thickness >0.7mm, penetration time >60min. according EN374.

Nitrilrubber; handglove thickness >0.3mm, penetration time >60min. according EN374.

· Not suitable are gloves made of the following materials:

Strong material gloves

Leather gloves

· Eye protection:



Tightly sealed goggles

· Body protection: Use protective suit.

**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 at 20 °C: n.v.t.

· Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	150 °C

· Flash point: 42 °C

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature: 210 °C

(Contd. on page 7)

Trade name: Epifanes Mono-Urethane Yacht paint (all colours)

(Contd. of page 6)

· 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:	0.6 Vol %
Upper:	7.0 Vol %
· Vapour pressure at 20 °C:	1.0 hPa
· Density at 20 °C:	1.1 g/cm <sup>3</sup>
· 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:	50 s (ISO 6 mm)
· Solvent separation test:	n.v.t. %
· Solvent content:	
Organic solvents:	30.8 %
VOC content:	30.8 %
	VOC content: 339.3 g/l / 2.83 lb/gl
Solids content:	60.9 % (VB% 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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(Contd. on page 8)

Trade name: Epifanes Mono-Urethane Yacht paint (all colours)

(Contd. of page 7)

### SECTION 11: Toxicological information

- 11.1 Information on toxicological effects
- Acute toxicity:

- LD/LC50 values relevant for classification:

64742-48-9 naphtha (petroleum), hydrotreated heavy

Oral	LD50	>5000 mg/kg bw (rat)
Dermal	LD50	>5000 mg/kg bw (rabbit) ((24h))
Inhalative	LC50	>5000 mg/m <sup>3</sup> (vapour) (rat) ((8h))

1330-20-7 xylene

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

96-29-7 2-butanone oxime

Oral	LD50	3700 mg/kg bw (rat)
Dermal	LD50	200-2000 mg/kg bw (rat)
Inhalative	LC50/4 h	20 mg/l (rat)

64742-95-6 petroleum, nafta, licht aromatisch

Oral	LD50	3592 mg/kg (rat)
Dermal	LD50 (Konijn)	3160 mg/kg (rabbit)
Inhalative	LC50 (rat)	>6193 mg/m <sup>3</sup> (rat)

136-52-7 cobalt bis(2-ethylhexanoate)

Oral	LD50	>5000 mg/kg (rat)
Dermal	LD50 (Konijn)	5000 mg/kg (rabbit)

- Primary irritant effect:
- on the skin: No irritant effect.
- on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.

### SECTION 12: Ecological information

- 12.1 Toxicity

- Aquatic toxicity:

64742-48-9 naphtha (petroleum), hydrotreated heavy

EL50 (48h)	>1000 mg/l ((Daphnia magna-OECD 202))
EbL50 (72h)	>1000 mg/l (Pseudokirchneriella subcapitata-OECD 201)
ErL (72h)	>1000 mg/l (Pseudokirchneriella subcapitata-OECD 201)
LL50 (96h)	>1000 mg/l ((Onorhynchus mykiss OECD 203))
NOELR (72h)	3 mg/l ((Pseudo. subcapitata-biomass-OECD 201))
	100 mg/l ((Pseudo. subcap. growth rate OECD 201))

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)

96-29-7 2-butanone oxime

EC50	630 mg/l (other waterspecies 1) (BACTERIA; TOXICITEITSTEST)
EC50 (48 hours)	500 mg/l (daphnia magna)
	750 mg/l (Daphnia similis Acute Toxicity Study) (DAPHNIA MAGNA)

(Contd. on page 9)



Trade name: Epifanes Mono-Urethane Yacht paint (all colours)

(Contd. of page 8)

EC50 (72 hours)	83 mg/l (other waterspecies 2) (SCENEDESMUS SUBSPICATUS)
LC50 (48 hours)	750 mg/l (other waterspecies 1)
LC50 (96 hours)	320-1000 mg/l (fish 1) (LEUCISCUS IDUS; STATISCH SYSTEM) 48 mg/l (fish 2) (LEPOSMIS MACEOCHIRUS; STATISCH SYSTEM)
136-52-7 cobalt bis(2-ethylhexanoate)	
EC50	0.1-1 mg/l (Algae, Growth inhibition test) 0.1-1 mg/l (daphnia magna)
LC50	0.1-1 mg/l (Fish Acute Toxicity Study)

- 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential  
Not worth-mentioning accumulating in organisms

1330-20-7 xylene	
Log Kow	3 (not specified)

- 12.4 Mobility in soil No further relevant information available.
- Ecotoxicological effects:  
Remark: Harmless to algae up to the tested concentration.
- 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.
- 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.
- Recommended cleansing agents: Solvent naphtha



**SECTION 14: Transport information**

· 14.1 UN-Number	
· ADR, IMDG, IATA	UN1263
· 14.2 UN proper shipping name	
· ADR	1263 PAINT (not viscous)

(Contd. on page 10)

Trade name: Epifanes Mono-Urethane Yacht paint (all colours)

(Contd. of page 9)

· IMDG, IATA	PAINT
· 14.3 Transport hazard class(es)	
· ADR	
	
· Class	3 (F1) Flammable liquids.
· Label	3
· IMDG	
	
· Class	3 Flammable liquids.
· Label	3
· IATA	
· Class	3 Flammable liquids.
· 14.4 Packing group	
· ADR, IMDG, IATA	III
· 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

Trade name: Epifanes Mono-Urethane Yacht paint (all colours)

(Contd. of page 10)

**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 %
I	≤1
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
  - H226 Flammable liquid and vapour.
  - H302 Harmful if swallowed.
  - 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.
  - H318 Causes serious eye damage.
  - H332 Harmful if inhaled.
  - H335 May cause respiratory irritation.
  - H336 May cause drowsiness or dizziness.
  - H351 Suspected of causing cancer.
  - 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.
  - R20/21 Harmful by inhalation and in contact with skin.
  - R21 Harmful in contact with skin.
  - R22 Harmful if swallowed.
  - R37 Irritating to respiratory system.
  - R38 Irritating to skin.
  - R40 Limited evidence of a carcinogenic effect.
  - R41 Risk of serious damage to eyes.
  - 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.
  - R65 Harmful: may cause lung damage if swallowed.
  - 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

(Contd. on page 12)

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

Printing date 31.07.2014

Version number 7

Revision: 31.07.2014

Trade name: Epifanes Mono-Urethane Yacht paint (all colours)

(Contd. of page 11)

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. 3: Flammable liquids, Hazard Category 3

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Carc. 2: Carcinogenicity, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

Asp. Tox. 1: Aspiration hazard, Hazard Category 1

Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, 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.