















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

- Product identifier
- Trade name: Epifanes Mono-urethane Yacht Paint (all colours)
- 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
- Information department: environment protection department
- Emergency telephone number:
Heeren & Zoon b.v. 0297360366
Zie onder Fabrikant/leverancier

2 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description:
Resin mixture
Solvent mixture with pigment additives












· Dangerous components:

64742-48-9	naphta (petroleum), hydrotreated heavy  Xn R65 R10-66 <hr/>  H226  H304	25-50%
64742-47-8	Distillates (petroleum), hydrotreated light  Xn R65  H304	2.5-10%
1330-20-7	xylene  Xn R20/21  Xi R38 R10 <hr/>  H226  H312; H332; H315	≤ 2.5%
96-29-7	2-butanone oxime  Xn R21-40  Xi R41-43 Carc. Cat. 3 <hr/>  H351  H318  H312; H317	≤ 2.5%

(Contd. on page 2)

Trade name: Epifanes Mono-urethane Yacht Paint (all colours)

(Contd. of page 1)

64742-95-6	<p>petroleum, nafta, licht aromatisch</p> <p> Xn R65</p> <p> Xi R36/38</p> <p> N R51/53</p> <p>R10</p> <hr/> <p> H226</p> <p> H304</p> <p> H411</p> <p> H315; H319</p> <p> H401</p>	≤ 2.5%
136-52-7	<p>cobalt bis(2-ethylhexanoate)</p> <p> Xn R22</p> <p> N R50/53</p> <p>H301</p> <hr/> <p> H400; H410</p>	≤ 2.5%

· Additional information:

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

3 Hazards identification

· Classification of the substance or mixture



GHS02 Flame

H226 Flammable liquid and vapour.

H333 May be harmful if inhaled.

· 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 was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

· Label elements

· Labelling according to EU guidelines:

The product has been classified and marked in accordance with directives on hazardous materials.

· Risk phrases:

10 Flammable.

66 Repeated exposure may cause skin dryness or cracking.

· Safety phrases:

2 Keep out of the reach of children.

23 Do not breathe fumes/aerosol.

24 Avoid contact with skin.

46 If swallowed, seek medical advice immediately and show this container or label.

51 Use only in well-ventilated areas.

(Contd. on page 3)

Trade name: Epifanes Mono-urethane Yacht Paint (all colours)

(Contd. of page 2)

- Special labelling of certain preparations:
Contains 2-butanone oxime, cobalt carboxylate. May produce an allergic reaction.
- Classification system:
- NFPA ratings (scale 0 - 4)



Health = 0
Fire = 2
Reactivity = 0

- HMIS-ratings (scale 0 - 4)



Health = 0
Fire = 2
Reactivity = 0

4 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.

5 Firefighting measures

- Suitable extinguishing agents:
CO₂, extinguishing powder or water spray. Fight larger fires with water spray.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture
Formation of toxic gases is possible during heating or in case of fire.
- Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
Ensure adequate ventilation
Keep away from ignition sources
Wear protective equipment. Keep unprotected persons away.
- Environmental precautions:
Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
- 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.

Trade name: Epifanes Mono-urethane Yacht Paint (all colours)

(Contd. of page 3)

7 Handling and storage

- Handling:
 - Precautions for safe handling
 - Ensure good ventilation/exhaustion at the workplace.
 - Prevent formation of aerosols.
 - Information about protection against explosions and fires:
 - Keep ignition sources away - Do not smoke.
 - Protect against electrostatic charges.
- 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 receptacle tightly sealed.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems:
 - No further data; see item 7.

- Components with limit values that require monitoring at the workplace:

1330-20-7 xylene

PEL	435 mg/m ³ , 100 ppm
REL	Short-term value: 655 mg/m ³ , 150 ppm Long-term value: 435 mg/m ³ , 100 ppm
TLV	Short-term value: 651 mg/m ³ , 150 ppm Long-term value: 434 mg/m ³ , 100 ppm
BEI	

- Additional information:
 - The lists that were valid during the creation were used as basis.
- Personal protective equipment:
 - General protective and hygienic measures:
 - Wash hands before breaks and at the end of work.
 - Do not inhale gases / fumes / aerosols.
 - Breathing equipment:
 - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- 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

(Contd. on page 5)

Trade name: Epifanes Mono-urethane Yacht Paint (all colours)

(Contd. of page 4)

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.
- Not suitable are gloves made of the following materials:
Strong gloves
Leather gloves
- Eye protection:



Tightly sealed goggles

- Body protection: Use protective suit.

9 Physical and chemical properties

· General Information	
· Appearance:	
Form:	Fluid
Color:	According to product specification
· Odor:	Characteristic
· Odour threshold:	Not determined.
· pH-value at 20°C (68 °F):	n.v.t.
· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	150°C (302 °F)
· Flash point:	42°C (108 °F)
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	210°C (410 °F)
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits:	
Lower:	0.6 Vol %
Upper:	7.0 Vol %
· Vapor pressure at 20°C (68 °F):	1.0 hPa (1 mm Hg)
· Density at 20°C (68 °F):	1.1 g/cm ³ (9.18 lbs/gal)
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
Water:	Not miscible or difficult to mix.
· Segregation coefficient (n-octanol/water):	Not determined.

(Contd. on page 6)

Trade name: Epifanes Mono-urethane Yacht Paint (all colours)

(Contd. of page 5)

· Viscosity:	
Dynamic:	Not determined.
Kinematic at 20°C (68 °F):	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)
· Other information	No further relevant information available.

10 Stability and reactivity

- Thermal decomposition / conditions to be avoided:
No decomposition if used according to specifications.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Acute toxicity:
- LD/LC50 values that are relevant for classification:
96-29-7 2-butanone oxime

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

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

12 Ecological information

- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- Behavior in environmental systems:
- Bioaccumulative potential Not worth-mentioning accumulating in organisms
- Ecotoxicological effects:
- Remark: Harmless to algae up to the tested concentration.
- Additional ecological information:
- General notes:
Water hazard class 2 (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.



Trade name: Epifanes Mono-urethane Yacht Paint (all colours)

(Contd. of page 6)

13 Disposal considerations

- Waste treatment methods
- Recommendation:
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.
- Recommended cleansing agent: Solvent naphtha

14 Transport information

- UN-Number
- ADR, IMDG, IATA UN1263
- UN proper shipping name
- DOT CONSUMER COMMODITY, ORM-D
- ADR 1263 PAINT
- IMDG CONSUMER COMMODITY, ORM-D
- IATA PAINT
- IATA PAINT
- Transport hazard class(es)
- ADR
- 
- Class 3 (F1) Flammable liquids
- Label 3
- IMDG
- 
- Class 3 Flammable liquids.
- Label 3
- IATA
- Class 3 Flammable liquids.
- Packing group
- DOT, ADR, IMDG, IATA III
- Environmental hazards:
- Marine pollutant: No
- Special precautions for user Warning: Flammable liquids
- Danger code (Kemler): 30
- EMS Number: F-E, S-E
- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

(Contd. on page 8)

Trade name: Epifanes Mono-urethane Yacht Paint (all colours)

(Contd. of page 7)

- Transport/Additional information:
- DOT
- Remarks: CERCLA/DOT RQ: 617gal./4786 lbs.
- IMDG
- Remarks: System Reference Code:5
- UN "Model Regulation": UN1263, PAINT, 3, III

15 Regulatory information

· Sara

· Section 355 (extremely hazardous substances):

None of the ingredient is listed.

· Section 313 (Specific toxic chemical listings):

1330-20-7	xylene
100-41-4	ethylbenzene
95-63-6	1,2,4-trimethylbenzene
98-82-8	cumene

· TSCA (Toxic Substances Control Act):

64742-47-8	Distillates (petroleum), hydrotreated light
1330-20-7	xylene
8002-43-5	Soyalecithine
96-29-7	2-butanone oxime
80-46-6	p-(1,1-dimethylpropyl)phenol
68409-80-3	Isomeren van vetzure calciumzouten, C6-C19 Isomers from fatty acid salts
22464-99-9	Zirconiumoctoate, 12 % Zr
100-41-4	ethylbenzene
136-52-7	cobalt bis(2-ethylhexanoate)
25551-13-7	trimethylbenzene
95-63-6	1,2,4-trimethylbenzene
112-34-5	2-(2-butoxyethoxy)ethanol
108-67-8	mesitylene
108-65-6	2-methoxy-1-methylethyl acetate
141-78-6	ethyl acetate

· Proposition 65

· Chemicals known to cause cancer:

100-41-4	ethylbenzene
98-82-8	cumene

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

(Contd. on page 9)

Trade name: Epifanes Mono-urethane Yacht Paint (all colours)

(Contd. of page 8)

· Cancerogenity categories

· EPA (Environmental Protection Agency)

1330-20-7	xylene	I
100-41-4	ethylbenzene	D
98-82-8	cumene	CBD

· IARC (International Agency for Research on Cancer)

1330-20-7	xylene	3
100-41-4	ethylbenzene	2B
136-52-7	cobalt bis(2-ethylhexanoate)	2B

· NTP (National Toxicology Program)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

1330-20-7	xylene	A4
100-41-4	ethylbenzene	A3

· MAK (German Maximum Workplace Concentration)

96-29-7	2-butanone oxime	2
100-41-4	ethylbenzene	3A

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

· National regulations:

· Technical instructions (air):

Class	Share in %
I	≤ 2,5
NK	25-50

· Water hazard class:

Water hazard class 2 (Self-assessment): hazardous for water.

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.

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 ICAO: International Civil Aviation Organization
 ACGIH: American Conference of Governmental Industrial Hygienists
 NFPA: National Fire Protection Association (USA)
 HMIS: Hazardous Materials Identification System (USA)
 VOC: Volatile Organic Compounds (USA, EU)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent

· * Data compared to the previous version altered.