

1 Identification

- Product identifier
- Trade name: Epifanes Epoxythinner D-601
- Relevant identified uses of the substance or mixture and uses advised against
- Product category PC9a Coatings and paints, thinners, paint removers
- Process category PROC10 Roller application or brushing
- Environmental release category ERC2 Formulation of preparations
- Application of the substance / the mixture
See our technical datasheet for application of this product.
- 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:
Emergency Phone Number (24 hours) CHEMTREC (800-424-9300)
Outside US: 703-527-3887

2 Hazard(s) identification

- Classification of the substance or mixture



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
STOT SE 3 H335 May cause respiratory 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

R36/37/38: Irritating to eyes, respiratory system and skin.



F; Highly flammable

R11: Highly flammable.

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- Information concerning particular hazards for human and environment:
The product is skin-resorbing.
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 was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

- Label elements
- GHS label elements
The product is classified and labeled according to the Globally Harmonized System (GHS).
- Hazard pictograms



GHS02



GHS07



GHS08

- Signal word Danger
- Hazard-determining components of labeling:
4-methylpentan-2-one
xylene
- Hazard statements
H225 Highly flammable liquid and vapor.
H332 Harmful if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H351 Suspected of causing cancer.
H335 May cause respiratory irritation.
- Precautionary statements
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P260 Do not breathe dust/fume/gas/mist/vapors/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/doctor.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- Classification system:
- NFPA ratings (scale 0 - 4)



Health = 1
Fire = 3
Reactivity = 0

- HMIS-ratings (scale 0 - 4)



Health = 1
Fire = 3
Reactivity = 0

- Other hazards
- Results of PBT and vPvB assessment
- PBT: Not applicable.

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vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Solvent mixture

Dangerous components:

CAS: 108-10-1 EINECS: 203-550-1 Index number: 606-004-00-4 Reg.nr.: 01-2119473980-30	4-methylpentan-2-one Xn R20 Xi R36/37 F R11 R66 Flam. Liq. 2, H225 Carc. 2, H351 Acute Tox. 4, H332; Eye Irrit. 2A, H319; STOT SE 3, H335	25-50%
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	25-50%
CAS: 107-98-2 EINECS: 203-539-1 Index number: 603-064-00-3 Reg.nr.: 01-2119457435-35	1-methoxy-2-propanol R10-67 Flam. Liq. 3, H226	10-25%

Additional information:

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

4 First-aid measures

- Description of first aid measures
- General information:
Take affected persons out into the fresh air.
Do not leave affected persons unattended.
Seek medical treatment.
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. If symptoms persist, consult a doctor.
- After swallowing:
Rinse out mouth and then drink plenty of water.
Try not to vomit. Swallow activated carbon and sodium sulphate.
- Information for doctor:
- Most important symptoms and effects, both acute and delayed
No further relevant information available.

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- Indication of any immediate medical attention and special treatment needed
No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents:
CO2, sand, extinguishing powder. Do not use water.
- For safety reasons unsuitable extinguishing agents:
Water
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.
- Advice for firefighters
- Protective equipment:
Wear fully protective suit.
Mouth respiratory protective device.

* 6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
Keep away from ignition sources
Ensure adequate ventilation
Wear protective equipment. Keep unprotected persons away.
- Environmental precautions:
Do not allow product to reach sewage system or any water course.
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.
- 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.
Do not flush with water or aqueous cleansing agents
- 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.

* 7 Handling and storage

- Handling:
- Precautions for safe handling
Use only in well ventilated areas.
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.

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- Conditions for safe storage, including any incompatibilities
- Storage:
- Requirements to be met by storerooms and receptacles:
Store only in the original receptacle.
Store in a cool location.
- Information about storage in one common storage facility:
Store away from flammable substances.
- Further information about storage conditions:
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- 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.
- Control parameters

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

108-10-1 4-methylpentan-2-one

Inhalative	(Tgg)time weighted average 15 min. / Exposure time	208 mg/m ³ (Algemene bevolking/ General population)
	(Tgg)time weighted average 8 hours / Exposure time	104 mg/m ³ (Algemene bevolking/ General population)

1330-20-7 xylene

Inhalative	(Tgg)time weighted average 15 min. / Exposure time	442 mg/m ³ (Algemene bevolking/ General population)
	(Tgg)time weighted average 8 hours / Exposure time	210 mg/m ³ (Algemene bevolking/ General population)

107-98-2 1-methoxy-2-propanol

Inhalative	(Tgg)time weighted average 15 min. / Exposure time	563 mg/m ³ (Algemene bevolking/ General population)
	(Tgg)time weighted average 8 hours / Exposure time	375 mg/m ³ (Algemene bevolking/ General population)

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108-10-1 4-methylpentan-2-one

PEL	Long-term value: 410 mg/m ³ , 100 ppm
REL	Short-term value: 300 mg/m ³ , 75 ppm Long-term value: 205 mg/m ³ , 50 ppm
TLV	Short-term value: 307 mg/m ³ , 75 ppm Long-term value: 82 mg/m ³ , 20 ppm BEI

1330-20-7 xylene

PEL	Long-term value: 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

107-98-2 1-methoxy-2-propanol

REL	Short-term value: 540 mg/m ³ , 150 ppm Long-term value: 360 mg/m ³ , 100 ppm
TLV	Short-term value: 369 mg/m ³ , 100 ppm Long-term value: 184 mg/m ³ , 50 ppm

· Ingredients with biological limit values:

108-10-1 4-methylpentan-2-one

BEI	1 mg/L Medium: urine Time: end of shift Parameter: MIBK
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1330-20-7 xylene

BEI	1.5 g/g creatinine Medium: urine Time: end of shift Parameter: Methylhippuric acids
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· Additional information:

The lists that were valid during the creation were used as basis.

· Exposure controls

· Personal protective equipment:

· General protective and hygienic measures:

Do not eat, drink, smoke or sniff while working.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

· Breathing equipment:

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 respiratory protective device that is independent of circulating air.

Filter AX

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- 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 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: PVA, fluorinated rubber

Glove thickness > 0.7mm, breakthrough time > 480 min. To EN374

Butyl rubber, glove thickness 0.7 mm, > 480 min breakthrough time / permeation to EN374.

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

Nitrile

Glove thickness > 0.45 mm, breakthrough time > 30 min. to EN374

- Eye protection:



Tightly sealed goggles

- Body protection: Use protective suit.

9 Physical and chemical properties

- Information on basic physical and chemical properties

- General Information

- Appearance:

Form: Fluid

Color: Clear

- Odor: Characteristic

- Odour threshold: Not determined.

- pH-value at 20 °C (68 °F): n.v.t.

- Change in condition

Melting point/Melting range: n.v.t. °C

Boiling point/Boiling range: > 125 °C (> 257 °F)

- Flash point: 16 °C (61 °F)

- Flammability (solid, gaseous): Not applicable.

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· Ignition temperature:	270 °C (518 °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:	1.1 Vol %
Upper:	20.0 Vol %
· Vapor pressure at 20 °C (68 °F):	12 hPa (9 mm Hg)
· Density at 20 °C (68 °F):	0.85 g/cm ³ (7.093 lbs/gal)
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water at 20 °C (68 °F):	> 20 g/l
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic at 20 °C (68 °F):	0.9 mm ² /s
· Solvent content:	
Organic solvents:	100.0 %
VOC content:	100.0 %
	VOC content:
	850.0 g/l / 7.09 lb/gl
· Other information	No further relevant information available.

10 Stability and reactivity

- Reactivity
- Chemical stability
- Thermal decomposition / conditions to be avoided:
No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products:
Flammable gases/vapors
Aldehyde
Carbon monoxide and carbon dioxide

US

(Contd. on page 9)

Trade name: Epifanes Epoxythinner D-601

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11 Toxicological information

- Information on toxicological effects
- Acute toxicity:

- LD/LC50 values that are relevant for classification:

108-10-1 4-methylpentan-2-one

Oral	LD50	2080 mg/kg bw (rat)
Dermal	LD50	16000 mg/kg bw (rab)
Inhalative	LC50/4 h	8.3-16.6 mg/l (rat)

1330-20-7 xylene

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

107-98-2 1-methoxy-2-propanol

Oral	LD50	5660 mg/kg bw (rat)
Dermal	LD50	13000 mg/kg bw (rabbit)
Inhalative	LC50/4 h	6 mg/l (rat)

- Primary irritant effect:
 - on the skin: Irritant to skin and mucous membranes.
 - on the eye: Irritating effect.
- Sensitization: No sensitizing effects known.
- Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful
Irritant

- Carcinogenic categories

- IARC (International Agency for Research on Cancer)

108-10-1	4-methylpentan-2-one	2B
1330-20-7	xylene	3

- NTP (National Toxicology Program)

None of the ingredients is listed.

- OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- Toxicity

- Aquatic toxicity:

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)

- Persistence and degradability No further relevant information available.
- Other information: The product is biodegradable.
- Behavior in environmental systems:
- Bioaccumulative potential

Not worth-mentioning accumulating in organisms

1330-20-7 xylene

Log Kow	3 (not specified)
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Trade name: Epifanes Epoxythinner D-601

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- Mobility in soil No further relevant information available.
- 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.
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.
- Other adverse effects No further relevant information available.

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.

14 Transport information

· UN-Number	
· DOT, ADR, IMDG, IATA	UN1993
· UN proper shipping name	
· DOT	CONSUMER COMMODITY, ORM-D Flammable liquids, n.o.s. (Methyl isobutyl ketone, Xylenes)
· ADR	1993 Flammable liquids, n.o.s. (Methyl isobutyl ketone, Xylenes)
· IMDG	CONSUMER COMMODITY, ORM-D FLAMMABLE LIQUID, N.O.S. (METHYL ISOBUTYL KETONE, XYLENES)
· IATA	FLAMMABLE LIQUID, N.O.S. (METHYL ISOBUTYL KETONE, XYLENES)

· Transport hazard class(es)

· DOT



· Class 3 Flammable liquids
· Label 3

· ADR




· Class 3 (F1) Flammable liquids

(Contd. on page 11)

Trade name: Epifanes Epoxythinner D-601

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· Label	3
· IMDG, IATA	
	
· Class	3 Flammable liquids
· Label	3
· Packing group	
· DOT, ADR, IMDG, IATA	II
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Flammable liquids
· Danger code (Kemler):	33
· EMS Number:	F-E, S-E
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
· Remarks:	CERCLA/DOT RQ: 617gal./4786 lbs.
· ADR	
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN1993, Flammable liquids, n.o.s. (Methyl isobutyl ketone, Xylenes), 3, II

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· Section 355 (extremely hazardous substances):

None of the ingredient is listed.

· Section 313 (Specific toxic chemical listings):

108-10-1 4-methylpentan-2-one

1330-20-7 xylene

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· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65

· Chemicals known to cause cancer:

108-10-1 | 4-methylpentan-2-one

· 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:

108-10-1 | 4-methylpentan-2-one

· Cancerogenity categories

· EPA (Environmental Protection Agency)

108-10-1 | 4-methylpentan-2-one

I

1330-20-7 | xylene

I

· TLV (Threshold Limit Value established by ACGIH)

1330-20-7 | xylene

A4

· MAK (German Maximum Workplace Concentration)

None of the ingredients is listed.

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

None of the ingredients is listed.

· GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms



GHS02

GHS07

GHS08

· Signal word Danger

· Hazard-determining components of labeling:

4-methylpentan-2-one

xylene

· Hazard statements

H225 Highly flammable liquid and vapor.

H332 Harmful if inhaled.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H351 Suspected of causing cancer.

H335 May cause respiratory irritation.

· Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P260 Do not breathe dust/fume/gas/mist/vapors/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/doctor.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

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Trade name: Epifanes Epoxythinner D-601

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P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- National regulations:
- Technical instructions (air):

Class	Share in %
NK	50-100

- Water hazard class:
Water hazard class 2 (Self-assessment): hazardous for water.
- Chemical safety assessment:
A Chemical Safety Assessment has not been carried out.

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.

- Date of preparation / last revision 04/01/2015 / 2
- 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
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 ACGIH: American Conference of Governmental Industrial Hygienists
 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)
 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
 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. 2A: Serious eye damage/eye irritation, Hazard Category 2A
 Carc. 2: Carcinogenicity, Hazard Category 2
 STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
- * Data compared to the previous version altered.