Safety Data Sheet

Plough Varnish Paint VLB5707

Replaces date: 01-11-2020 Revision date: 01-11-2022

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

1.1. Product identifier

Trade name: Plough Varnish Paint VLB5707

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended uses: Coating of metal.

Inadvisable uses: The product is recommended for only the above described uses.

1.3. Details of the supplier of the safety data sheet

Company: Esbjerg Farve- & Lakfabrik A/S
Address: Energivej 13
Zip code: DK-6700
City: Esbjerg
Country: DENMARK
E-mail: info@esbjergpaints.dk
Phone: 0045 75 12 86 00
Fax: 0045 75 45 33 68
Homepage: www.esbjergpaints.dk

Company: The Vapormatic Co. Ltd.
Address: Kestrel Way, Sowton Industrial Estate
Zip code: EX2 7NB
City: EXETER
Country: UNITED KINGDOM
E-mail: info@vapormatic.com
Phone: + 44 (0)1392 435461
Fax: + 44 (0)1392 438445
Homepage: www.vapormatic.com

1.4. Emergency Telephone Number

GB: +44 1215074123 (Advice and guidance) (Around the clock)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

CLP-classification: Flam. Liq. 3;H226 Acute Tox. 4;H312/332 Skin Irrit. 2;H315 Skin Sens. 1A;H317 STOT RE 2;H373

Most serious harmful effects: Flammable liquid and vapour. Harmful in contact with skin or if inhaled. Causes skin irritation. May cause an allergic skin reaction. May cause damage to organs through prolonged or repeated exposure.

2.2. Label elements

Pictograms

Signal word: Warning

Contains

Substance: Xylene; 2-butanone oxime; Cobalt bis(2-ethylhexanoate)

H-phrases

H226	Flammable liquid and vapour.
H312/332	Harmful in contact with skin or if inhaled.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H373	May cause damage to organs through prolonged or repeated exposure.

P-phrases

P302/352	IF ON SKIN: Wash with plenty of soap and water.
P304+340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves/protective clothing.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P261	Avoid breathing vapours/spray.

2.3. Other hazards

The product does not contain any PBT or vPvB substances.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Substance	CAS No	EC No	REACH Reg. No.	Concentration	Notes	CLP-classification
Xylene	1330-20-7	215-535-7	01-2119488216-32	25 - 50%		Flam. Liq. 3;H226 Acute Tox. 4;H312 Skin Irrit. 2;H315 Acute Tox. 4;H332
ethylbenzene	100-41-4	202-849-4	01-2119489370-35	10 - 25%		Flam. Liq. 2;H225 Asp. Tox. 1;H304 Acute Tox. 4;H332 STOT RE 2;H373
2-butanone oxime	96-29-7	202-496-6	01-2119539477-28	< 0.4%		Acute Tox. 4;H312 Skin Sens. 1;H317 Eye Dam. 1;H318 Carc. 2;H351
Cobalt bis(2-ethylhexanoate)	136-52-7	205-250-6	01-2119524678-29	< 0.2%		Skin Sens. 1A;H317 Eye Irrit. 2;H319 Repr. 1B;H360D Aquatic Acute 1;H400 Aquatic Chronic 3;H412
toluene	108-88-3	203-625-9	01-2119471310-51	< 0.3%		Flam. Liq. 2;H225 Asp. Tox. 1;H304 Skin Irrit. 2;H315 STOT SE 3;H336 Repr. 2;H361d STOT RE 2;H373

Please see section 16 for the full text of H-phrases.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation: If patient feels unwell move to fresh air and keep under surveillance. If the victim is unconscious, ascertain whether the victim is breathing. If breathing has stopped, apply

	artificial respiration. If the victim is unconscious but breathing, place in the recovery position and keep warm with blankets. Call for medical attention or ambulance.
Ingestion:	Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn´t enter the lungs. Get medical attention immediately!
Skin contact:	Promptly wash contaminated skin with soap or mild detergent and water. Promptly remove clothing if soaked through and wash as above. Do not use solvents.
Eye contact:	Flush immediately with lukewarm water (preferably using eye wash equipment) for at least 15 minutes. Open eye wide. Remove any contact lenses. Seek medical advice.
General:	If in doubt, seek medical advice. Also see para. 1

4.2. Most important symptoms and effects, both acute and delayed

Pain in the eyes, redness, tears, swollen eyelids, itching Headache, dizziness, drowsiness and nausea.

4.3. Indication of any immediate medical attention and special treatment needed

Seek medical advice in case of discomfort. Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media:	Fire can be extinguished with carbon dioxide, powder, foam or water spray.
Unsuitable extinguishing media:	Do not use a direct water jet that could spread the fire.

5.2. Special hazards arising from the substance or mixture

Avoid inhaling of waste gases. Combustion will generate harmful gases, as combustion residues and carbon monoxide.

5.3. Advice for fire-fighters

Cool closed containers with water. Fire will produce a thick black smoke. Products of combustion are harmful and respiratory protection is required.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:	Avoid inhalation of vapours. Remove all ignition sources and ensure sufficient ventilation.
For emergency responders:	Use nitrile protection gloves and self-contained breathing apparatus.

6.2. Environmental precautions

Notify proper authorities in case of contamination of soil or aquatic environment or discharge to drains.

6.3. Methods and material for containment and cleaning up

Prevent major quantities of spillage from being discharged into the sewage system or water by banking the spillage with sand or the like and collecting it. Clean the contaminated area with a suitable cleaning agent, but do not use solvent.

6.4. Reference to other sections

Also see item 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

The product may be charged electrostatically. Always use underground wire when transferring from one container to another. Personnel should wear antistatic shoes and clothing. Floors should be conductive. Do not use tools which may produce sparks. Avoid contact with eyes and skin. Avoid inhaling vapors and spray mists. Vapors may form explosive mixtures with air. Prevent the formation of flammable or explosive mixtures. Do not use this material near naked flames or any other ignition source. Electrical installations must be protected according to regulations.

7.2. Conditions for safe storage, including any incompatibilities

The product must be kept away from children. Store in a tightly closed container and in accordance with the current regulations in a dry and well-ventilated place away from food. Keep away from ignition sources, oxidizing agents and strong acidic and basic substances. No smoking and use of open fire. No admittance to unauthorized persons. Opened containers must be carefully closed and stored upright to prevent any leakage.

7.3. Specific end use(s)

Applications is mentioned in item 1.2.

Other Information: Smoking and the consumption of food and drink are not permitted in work rooms. Personal protective equipment: Refer to section 8.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit

Substance name	Time period	ppm	mg/m3	fiber/cm3	Comments	Remarks
Xylene	8h	50	220			BMGV
Xylene	15m	100	441			BMGV
ethylbenzene	8h	100	441			Sk
ethylbenzene	15m	125	552			Sk
toluene	8h	50	191			Sk
toluene	15m	100	384			Sk

BMGV = Biological monitoring may be appropriate and Biological Monitoring Guidance Value is listed in Table 3 (Occupational Exposure Limits)

Sk = Can be absorbed through skin

Legal basis: EH40/2005 Workplace exposure limits incl. supplement from October 2007.

PNEC

Xylene, cas-no 1330-20-7				
Exposure	Value	Assessment Factor	Extrapolation Method	Note
Soil	2,31 mg/kg			
Freshwater	0,327 mg/l			
Marine water	0,327 mg/l			
Freshwater - sediment	12,64 mg/kg			
Marine water - sediment	12,64 mg/kg			
ethylbenzene, cas-no 100-41-4				
Exposure	Value	Assessment Factor	Extrapolation Method	Note
Freshwater	0,1 mg/l			
Marine water	0,01 mg/l			
Freshwater - sediment	13,7 mg/kg			
Soil	2,68 mg/kg			
2-butanone oxime, cas-no 96-29-7				
Exposure	Value	Assessment Factor	Extrapolation Method	Note
Freshwater	0,256 mg/l			

toluene, cas-no 108-88-3				
Exposure	Value	Assessment Factor	Extrapolation Method	Note
Soil	2,89 mg/kg dw			
Freshwater	0,68 mg/l			
Marine water	0,68 mg/l			

Cobalt bis(2-ethylhexanoate), cas-no 136-52-7				
Exposure	Value	Assessment Factor	Extrapolation Method	Note
Freshwater	0,51 µg/l			
Marine water - sediment	9,5 mg/kg			
Freshwater - sediment	9,5 mg/kg			
Soil	10,9 mg/kg			
Marine water	2,36 µg/l			

DNEL - workers

Xylene, cas-no 1330-20-7					
Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Inhalation	221 mg/m3	Long-term exposure		Local effects	
Inhalation	442 mg/m3	Acute / short-term exposure		Systemic effects	
Inhalation	289 mg/m3	Acute / short-term exposure		Local effects	
Dermal	180 mg/kg bw/day	Long-term exposure		Systemic effects	

ethylbenzene, cas-no 100-41-4					
Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Dermal	180 mg/kg bw/day	Long-term exposure		Systemic effects	
Inhalation	77 mg/m3	Long-term exposure		Systemic effects	
Inhalation	293 mg/m3	Acute / short-term exposure		Local effects	

2-butanone oxime, cas-no 96-29-7					
Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Inhalation	9 mg/m3	Acute / short-term exposure		Systemic effects	
Inhalation	3,33 mg/m3	Long-term exposure		Local effects	
Dermal	2,5 mg/kg bw/day	Acute / short-term exposure		Systemic effects	

toluene, cas-no 108-88-3					
Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Inhalation	192 mg/m³	Long-term exposure		Local effects	
Inhalation	192 mg/m³	Long-term exposure		Systemic effects	
Dermal	384 mg/kg bw/day	Long-term exposure		Systemic effects	
Inhalation	384 mg/m3	Acute / short-term exposure		Local effects	
Inhalation	384 mg/m3	Acute / short-term exposure		Systemic effects	

Cobalt bis(2-ethylhexanoate), cas-no 136-52-7					
Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Inhalation	235,1 µg/m3	Long-term exposure		Local effects	

DNEL - general population

2-butanone oxime, cas-no 96-29-7					
Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Inhalation	2 mg/m3	Long-term exposure		Local effects	
Dermal	1,5 mg/kg bw/day	Acute / short-term exposure		Systemic effects	
Dermal	0,78 mg/kg bw/day	Long-term exposure		Systemic effects	
Cobalt bis(2-ethylhexanoate), cas-no 136-52-7					
Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Inhalation	37 µg/m3	Long-term exposure		Local effects	
Oral	55,8 µg/kg bw/day	Long-term exposure		Systemic effects	

Other Information: See above.

8.2. Exposure controls

Appropriate engineering controls: All work must be planned with a view to limit the breathing of fumes and the exposure to the skin. Work under effective process ventilation (e.g. local exhaust ventilation). If this is not possible, use respiratory protection.

Personal protective equipment, eye/face protection: Use suitable protective goggles or full face mask for protection against splashes.

Personal protective equipment, skin protection: If possible, wear special work clothes. When spraying wear coveralls.

Personal protective equipment, hand protection: Use nitrile protection gloves. A 15-mil thickness glove provides a one-hour breakthrough-time. Follow the glove manufacturer's recommendations on use and replacement.

Personal protective equipment, respiratory protection: Use compressed-air full face mask.

Environmental exposure controls: It must be ensured that local regulations for discharge are met.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Parameter	Value/unit
State	Liquid
Colour	Blue
Odour	Odour of organic solvent.
Solubility	Soluble in: Organic solvents.
Explosive properties	See explosive limits
Oxidising properties	No information available

Parameter	Value/unit	Remarks
pH (solution for use)		Irrelevant
pH (concentrate)		Irrelevant
Melting point	No data	
Freezing point	No data	
Initial boiling point and boiling range	No data	
Flash Point	27 °C	
Evaporation rate	No data	
Flammability (solid, gas)	No data	
Flammability limits	No data	
Explosion limits	1 - 12	

Vapour pressure	No data	
Vapour density	No data	
Relative density	No data	
Partition coefficient n-octonol/water	No data	
Auto-ignition temperature	No data	
Decomposition temperature	No data	
Viscosity	~ 35 Sec. 4 mm cup	
Odour threshold	No data	

9.2 Other information

Parameter	Value/unit	Remarks
Density	0.92 g/ml	
Fire class	II-1	
Weight % organic solvents	56	
VOC (G/liter)	515	

Other Information: Solubility in water: Insoluble in water. Fat solubility: irrelevant

SECTION 10: Stability and reactivity

10.1. Reactivity

See below.

10.2. Chemical stability

Stable under recommended storage and handling conditions.

10.3. Possibility of hazardous reactions

Ignitable at temperatures above the flash point. The fumes can ignite by e.g. a spark, a warm surface or a glow. The fumes can mix to explosive mixtures with air. At room temperature the fumes are more heavily than air and can spread along the floor.

10.4. Conditions to avoid

Stable at normal temperature. When exposed to high temperatures, toxic decomposition products may be formed.

10.5. Incompatible materials

To prevent heat-generating reactions, keep the product away from oxidizing agents and strong acidic and basic substances.

10.6. Hazardous decomposition products

carbon monoxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Xylene, cas-no 1330-20-7

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		> 3500mg/kg bw			

ethylbenzene, cas-no 100-41-4

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		3500mg/kg bw			

2-butanone oxime, cas-no 96-29-7

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		2528 mg/kg			

toluene, cas-no 108-88-3

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		> 5000mg/kg bw			

Cobalt bis(2-ethylhexanoate), cas-no 136-52-7

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50 LD50		3129mg/kg bw			

Ingestion of large quantities may cause gastrointestinal disorders.

Acute toxicity - dermal

Xylene, cas-no 1330-20-7

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rabbit	LD50		12126 mg/kg bw			

ethylbenzene, cas-no 100-41-4

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rabbit	LD50		15.4mg/kg bw			

2-butanone oxime, cas-no 96-29-7

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		1000 - 1800mg/kg			

toluene, cas-no 108-88-3

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rabbit	LD50		> 5000mg/kg bw			

Cobalt bis(2-ethylhexanoate), cas-no 136-52-7

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50 LD50		> 2000mg/kg bw			

Organic solvents have a degreasing effect on the skin. Organic solvents may be absorbed through skin.

Acute toxicity - inhalation

Xylene, cas-no 1330-20-7

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LC50 (vapour)	4 h	11mg/l			

ethylbenzene, cas-no 100-41-4

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LC50 (vapour)	4 h	17.2mg/l			

2-butanone oxime, cas-no 96-29-7

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LC50	4 h	20mg/l			

toluene, cas-no 108-88-3

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LC50 (vapour)	4 h	28.1mg/l			

Inhalation of vapors may cause symptoms of poisoning such as memory and concentration difficulties, abnormal tiredness, irritability and, in extreme cases, unconsciousness. Protracted inhalation in high concentrations may cause permanent damage to the central nervous system.

Skin corrosion/irritation: Prolonged or repeated skin contact will degrease skin and may cause irritation.

Serious eye damage/eye irritation: Splashing into eyes may cause smarting/irritation.

Respiratory sensitisation or skin sensitisation: May cause an allergic skin reaction.

Germ cell mutagenicity: Would not be expected germ cell mutagen

Carcinogenic properties: Contains 2-Butanonoxim - see item 3.

Reproductive toxicity: Would not be expected to be a reproductive toxicant.

Single STOT exposure: No known hazards.

Repeated STOT exposure: May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard: Are not classified with H304 for aspiration hazard due to the viscosity.

SECTION 12: Ecological information

12.1. Toxicity

Xylene, cas-no 1330-20-7

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
Acute algae	Pseudokirchneriella subcapitata	72 h	EC50	2.2mg/l		OECD 201	
Acute Daphnia	Daphnia magna	24 h	IC50	1mg/l		OECD 202	
Acute fish	Oncorhynchus mykiss	96 h	LC50	2.6mg/l		OECD 203	

ethylbenzene, cas-no 100-41-4

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
Acute daphnia	Daphnia magna	48 h	EC50	2.4mg/l			
Acute fish	Pseudokirchneriella subcapitata	72 h	LC50	4.6mg/l			

2-butanone oxime, cas-no 96-29-7

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
Acute Daphnia	Daphnia magna	48 h	EC50	> 500mg/l			
Acute fish	Poecilia reticulata	96 h	LC50	760 mg/l		ISO 7346/1-3	
Acute algae	Desmodesmus	72 h	EC50	83 mg/l		DIN 38412/9	

toluene, cas-no 108-88-3

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
Acute fish	Onchorhynchus mykiss	96 h	LC50	5.5mg/l			
Acute algae		72 h	EC50	10mg/l			
Acute daphnia	Daphnia magna	48 h	EC50	3.78mg/l			

Cobalt bis(2-ethylhexanoate), cas-no 136-52-7

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
Acute algae		72 h	IC50	528 mg/l			

12.2. Persistence and degradability

No information available

12.3. Bioaccumulative potential

No information available

12.4. Mobility in soil

The product is insoluble in water and will spread out on the surface.

12.5. Results of PBT and vPvB assessment

The product does not contain any PBT or vPvB substances.

12.6. Other adverse effects

No information available

Other Information

Do not dispose of this product in drains, watercourses, or on the ground.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Avoid discharge to drain or surface water.

Product residues are classified as chemical waste.

Category of waste: Waste-code: 08 01 11

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN-No.:	1263	**14.4. Packing group:**	III
14.2. UN proper shipping name:	PAINT	**14.5. Environmental hazards:**	The product should not be labelled as an environmental hazard (symbol: fish and tree).
14.3. Transport hazard class(es):	3		
Hazard label(s):	3		
Hazard identification number:	30	**Tunnel restriction code:**	D/E

Inland water ways transport (ADN)

14.1. UN-No.:	1263	**14.4. Packing group:**	III
14.2. UN proper shipping name:	PAINT	**14.5. Environmental hazards:**	The product should not be labelled as an environmental hazard (symbol: fish and tree).
14.3. Transport hazard class(es):	3		
Hazard label(s):	3		
Transport in tank vessels:			

Sea transport (IMDG)

14.1. UN-No.:	1263	**14.4. Packing group:**	III
14.2. UN proper shipping name:	PAINT	**14.5. Environmental hazards:**	The product is not a Marine Pollutant (MP).
14.3. Transport hazard class(es):	3	**Environmental Hazardous Substance Name(s):**	
Hazard label(s):	3		
EmS:	F-E, S-E	**IMDG Code segregation group:**	- None -

Air transport (ICAO-TI / IATA-DGR)

14.1. UN-No.:	1263	**14.4. Packing group:**	III
14.2. UN proper shipping name:	PAINT	**14.5. Environmental hazards:**	The product should not be labelled as an environmental hazard (symbol: fish and tree).
14.3. Transport hazard class(es):	3		
Hazard label(s):	3		

14.6. Special precautions for user

Irrelevant.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Irrelevant.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Special Provisions:

15.2. Chemical Safety Assessment

Other Information: Chemical safety assessment has not been performed.

SECTION 16: Other information

Version history and indication of changes

Version	Revision date	Responsible	Changes
6.0.0	16/01/2020	GK	3, 8, 9, 11, 12
5.0.0	07/11/2019	GK	2, 3, 11, 13, 14, 16
4.0.0	10/03/2017	GK	12
3.0.0	02/11/2016	GK	11
2.0.0	23/05/2016	GK	2, 3, 13
1.0.0	12/10/2015	GK	

Abbreviations: DNEL: Derived No Effect Level. PNEC: Predicted No Effect Concentration.

References to literature and data sources: REACH: REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals. CLP: REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on classification, labelling and packaging of substances and mixtures.

Other Information: The user's working conditions are outside our control. The information in this Material Safety Data Sheet is based upon our knowledge and on European Union legislation. It is the responsibility of the users to fulfil the requirements set by National Legislation. The information is no guarantee of the properties of the product. The Material Safety Data Sheet may only be reproduced with the permission of the manufacturer.

Training advice: The instructions in this Material Safety Data Sheet are given on the assumption that the product is used as stated in item 1. Restrictions of use and special training requirements must also be complied with. The information in this Material Safety Data Sheet should be regarded as a description of the safety issues concerning the product.

List of relevant H-statements

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.
H312/332	Harmful in contact with skin or if inhaled.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H360D	May damage the unborn child.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

Document language: GB