LIQUID

Safety Data Sheet
Enke Multi-Protect (EMP)

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1	Trade name:	Enke Multi-Protect (EMP)
1.2	Relevant identified uses of the substance or mixture and uses advised against	
	Use of the substance/mixture:	Anticorrosive paint
1.3	Details of the supplier of the safety data sheet: Street: Place: Tel: E-mail: Internet: Responsible department:	ENKE-Werk Johannes Enke GmbH & Co. KG Hamburger Str. 16 40221 Düsseldorf, Germany +49 (0) 211 / 30 40 74 info@enke-werk.de www.enke-werk.de/en On weekdays between 7 a.m. and 4 p.m.
1.4	Emergency telephone:	Poison Information Centre (24h): +49 (0) 551 / 19 240

SECTION 2: HAZARD IDENTIFICATION

2.1	Classification of the substance or mixture	
	Regulation (EC) No. 1272/2008	
	Hazard categories:	
	Flammable liquid:	Flam. Liq. 3
	Specific target organ toxicity - single exposure:	STOT SE 3
	Specific target organ toxicity - single exposure:	STOT SE 3
	Hazardous to the aquatic environment:	Aquatic Chronic 3
	Hazard Statements:	
	Flammable liquid and vapour.	
	May cause respiratory irritation.	
	May cause drowsiness or dizziness.	
	Harmful to aquatic life with long lasting effects.	
2.2	Label elements	
	Regulation (EC) No. 1272/2008	
	Hazard components for labelling	Hydrocarbons, C9, aromatics
	Signal word:	Warning
	Pictograms:	
		
	Hazard statements	
	H226	Flammable liquid and vapour.
	H335	May cause respiratory irritation.
	H336	May cause drowsiness or dizziness.
	H412	Harmful to aquatic life with long lasting effects
	Precautionary statements	
	P261	Avoid breathing Steam/Aerosol.
	P262	Do not get in eyes, on skin, or on clothing.
	P273	Avoid release to the environment.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P331	Do NOT induce vomiting.

2.3	Other hazards	No information available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2	Mixtures
	Chemical characterization
	Preparation of acrylic polymers, pigments and additives
	Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
	Hydrocarbons, C9, aromatics			< 25 %
			01-2119455851-35	
	Flam. Liq. 3, STOT SE 3, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H226 H335 H336 H304 H411			
1330-20-7	xylene			5 - 10 %
	215-535-7	601-022-00-9		
	Flam. Liq. 3, Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2; H226 H332 H312 H315			
108-65-6	2-methoxy-1-methylethyl acetate			5 - 10 %
	203-603-9	607-195-00-7		
	Flam. Liq. 3; H226			
100-41-4	ethylbenzene			< 3 %
	202-849-4	601-023-00-4		
	Flam. Liq. 2, Acute Tox. 4, STOT RE 2, Asp. Tox. 1; H225 H332 H373 H304			
10048-98-3	barium hydrogen phosphate			< 3 %
	Acute Tox. 4, Acute Tox. 4; H332 H302			
1314-13-2	zinc oxide			< 1 %
	215-222-5	030-013-00-7		
	Aquatic Acute 1, Aquatic Chronic 1; H400 H410			

Full text of H and EUH statements: see section 16.

SECTION 4: FIRST AID MEASURES

4.1	Description of first aid measures	
	After inhalation	Remove person to fresh air and keep comfortable for breathing.
	After contact with skin	After contact with skin, wash immediately with plenty of water and soap. Take off contaminated clothing and wash it before reuse.
	After contact with eyes	Rinse immediately carefully and thoroughly with eye-bath or water. Consult an ophthalmologist.
	After ingestion	Rinse mouth immediately and drink plenty of water. Observe risk of aspiration if vomiting occurs.
4.2	Most important symptoms and effects, both acute and delayed	No information available.
4.3	Indication of any immediate medical attention and special treatment needed	Treat symptomatically. Observe risk of aspiration if vomiting occurs.

SECTION 5: FIREFIGHTING MEASURES

5.1	Extinguishing media	
	Suitable extinguishing media	Co-ordinate fire-fighting measures to the fire surroundings. Foam, Water spray jet, Carbon dioxide (CO2).
5.2	Special hazards arising from the substance or mixture	Vapours can form explosive mixtures with air. In case of fire may be liberated: Carbon monoxide; Carbon dioxide (CO2); Gases/vapours, harmful.
5.3	Advice for firefighters	In case of fire: Wear self-contained breathing apparatus.
	Additional information	Use water spray jet to protect personnel and to cool endangered containers. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1	Personal precautions, protective equipment and emergency procedures	Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.
6.2	Environmental precautions	Do not allow to enter into surface water or drains.
6.3	Methods and material for containment and cleaning up	Take up mechanically. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.
6.4	Reference to other sections	Safe handling: see section 7 Personal protection equipment: see section 8 Disposal: see section 13

SECTION 7: HANDLING AND STORAGE

7.1	Precautions for safe handling	
	Advice on safe handling	Avoid contact with skin and eyes and inhalation of vapors.
	Advice on protection against fire and explosion	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not apply in confined areas. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.
7.2	Conditions for safe storage, including any incompatibilities	
	Requirements for storage rooms and vessels	Keep container tightly closed in a cool place.
	Advice on storage compatibility	No special measures are necessary.
7.3	Specific end use(s)	Anticorrosive paint

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
108-65-6	1-Methoxypropyl acetate	50 100	274 548		TWA (8 h) STEL (15 min)	WEL WEL
100-41-4	Ethylbenzene	100 125	441 552		TWA (8 h) STEL (15 min)	WEL WEL
1330-20-7	Xylene: mixed isomers	50 100	220 441		TWA (8 h) STEL (15 min)	WEL WEL

Biological Monitoring Guidance Values (EH40)

CAS No	Substance	Parameter	Value	Test material	Sampling time
1330-20-7	Xylene, o-, m-, p- or mixed isomers	methyl hippuric acid	650 mmol/mol	urine	Post shift

8.2	Exposure controls	
	Appropriate engineering controls	If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.
	Protective and hygiene measures	Take off contaminated clothing. Wash hands before breaks and after work. When using do not eat or drink.
	Eye/face protection	Wear eye protection/face protection.
	Hand protection	When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Our recommendation is as follows: Suitable materials for prolonged, direct contact (at least protection index 6, corresponding to> 480 minutes permeation time according to EN 374): Neoprene®, Viton®, PVC, butyl or

		nitrile rubber. Dispose of contaminated gloves. With proper, optimized operation, only short-term contact and liquid splashes are to be expected, therefore, according to DGUV Information 212-007, a glove with a minimum protection class of 1 (<10 min) is sufficient. It must be ensured that the gloves are changed at short notice in case of chemical contact.
	Skin protection	Wear suitable protective clothing.
	Respiratory protection	In case of inadequate ventilation wear respiratory protection.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1	Information on basic physical and chemical properties		
	Physical State	Liquid	
	Colour	Different colours	
	Odour	Mild, petrol-like	
			Test Method
	pH-Value	not determined	
	Changes in the physical state		
	Melting point:	not determined	
	Initial boiling point and boiling range:	> 140 °C	
	Flash point:	32 °C	
	Flammability		
	Solid:	not applicable	
	Gas:	not applicable	
	Lower explosion limits:	not determined	
	Upper explosion limits:	not determined	
	Ignition temperature:	> 300 °C	
	Auto-ignition temperature		
	Solid:	not applicable	
	Gas:	not applicable	
	Decomposition temperature:	not determined	
	Oxidizing properties		
	Not oxidising.		
	Vapour pressure:	not determined	
	Density (at 20 °C):	1,4 g/cm³	
	Water solubility:	easily soluble	
	Solubility in other solvents		
	not determined		
	Partition coefficient:	not determined	
	Viscosity / dynamic: (at 20 °C)	~ 4000 mPa·s	
	Flow time: (at 20 °C)	250 s	ISO 2431 (6mm)
	Vapour density:	not determined	
	Evaporation rate:	not determined	
9.2	Other information		
	Solid content:	not determined	

SECTION 10: STABILITY AND REACTIVITY

10.2	Chemical stability	The product is stable under storage at normal ambient temperatures.
10.3	Possibility of hazardous reactions	No hazardous decomposition products if instructions

		for storage and handling are followed.
10.4	Conditions to avoid	None.
10.6	Hazardous decomposition products	No known hazardous decomposition products.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
	Hydrocarbons, C9, aromatics				
	oral	LD50 3592 mg/kg	Rat	OECD 401	
	dermal	LD50 > 3160 mg/kg	Rabbit	OECD 402	
1330-20-7	xylene				
	dermal	ATE 1100 mg/kg			
	inhalative vapour	ATE 11 mg/l			
	inhalative aerosol	ATE 1,5 mg/l			
108-65-6	2-methoxy-1-methylethyl acetate				
	oral	LD50 8532 mg/kg	Rat	RTECS	
	dermal	LD50 7500 mg/kg	Rabbit		
100-41-4	ethylbenzene				
	oral	LD50 3500 mg/kg	Rat	GESTIS	
	dermal	LD50 15400 mg/kg	Rabbit	GESTIS	
	inhalative (4 h) vapour	LC50 17,2 mg/l	Rat		
	inhalative aerosol	ATE 1,5 mg/l			
10048-98-3	barium hydrogen phosphate				
	oral	LD50 341 mg/kg	Rat		
	inhalative vapour	ATE 11 mg/l			
	inhalative aerosol	ATE 1,5 mg/l			
1314-13-2	zinc oxide				
	oral	LD50 > 5000 mg/kg	Rat	IUCLID	

STOT-single exposure

May cause respiratory irritation. May cause drowsiness or dizziness.

Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: ECOLOGICAL INFORMATION

12.1	Toxicity	The product is not: Ecotoxic.

CAS No	Chemical name

	Aquatic toxicity	Dose	[h] | [d]	Species	Source	Method
	Hydrocarbons, C9, aromatics					
	Acute fish toxicity	LC50 9,22 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)		
	Acute algae toxicity	ErC50 2,6 - 2,9 mg/l	72 h	Pseudokirchneriella subcapitata		
	Acute crustacea toxicity	EC50 3,2 mg/l	48 h	Daphnia magna (Big water flea)	OECD 202	
108-65-6	2-methoxy-1-methylethyl acetate					
	Acute fish toxicity	LC50 161 mg/l	96 h	Pimephales promelas		
	Acute crustacea toxicity	EC50 408 mg/l	48 h	Daphnia magna		
100-41-4	ethylbenzene					
	Acute algae toxicity	ErC50 3,6 mg/l	96 h		GESTIS	

12.2	Persistence and degradability	The product has not been tested.
12.3	Bioaccumulative potential	The product has not been tested.
	Partition coefficient n-octanol/water	

CAS No	Chemical name	Log Pow
108-65-6	2-methoxy-1-methylethyl acetate	0,43
100-41-4	ethylbenzene	3,15

12.4	Mobility in soil	The product has not been tested.
12.5	Results of PBT and vPvB assessment	The product has not been tested.
12.6	Other adverse effects	No information available.
	Further information	Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1	Waste treatment methods	
	Advice on disposal Disposal of packaging:	Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation. Containers have to be emptied completely and free of drops after final product removal. Emptied packages can be returned to the partners of Kreislaufsystem Blechverpackungen Stahl (Recycling system for metal containers). Collection points are provided by the ENKE company as user of the mark.
	Waste disposal number of waste from residues/unused products	080111 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU and removal of paint and varnish; waste paint and varnish containing organic solvents or other hazardous substances; hazardous waste
	Waste disposal number of used product	080111 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU and removal of paint and varnish; waste paint

		and varnish containing organic solvents or other hazardous substances; hazardous waste
	Contaminated packaging	Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: TRANSPORT INFORMATION

Land transport (ADR/RID)		
14.1	UN number:	No dangerous good in sense of this transport regulation.
14.2	UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3	Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4	Packing group:	No dangerous good in sense of this transport regulation.
	Other applicable information (land transport)	This product is not subject to above regulations if volume <450 l. Transport documents must be marked: "Transport according to comment under paragraph 2.2.3.1.5."
Inland waterways transport (ADN)		
14.1	UN number:	No dangerous good in sense of this transport regulation.
14.2	UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3	Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4	Packing group:	No dangerous good in sense of this transport regulation.
Marine transport (IMDG)		
14.1	UN number:	No dangerous good in sense of this transport regulation.
14.2	UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3	Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4	Packing group:	No dangerous good in sense of this transport regulation.
Air transport (ICAO-TI/IATA-DGR)		
14.1	UN number:	No dangerous good in sense of this transport regulation.
14.2	UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3	Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4	Packing group:	No dangerous good in sense of this transport regulation.
14.5	Environmental hazards	Not environmentally hazardous
	ENVIRONMENTALLY HAZARDOUS:	no
14.6	Special precautions for user	No information available.
14.7.	Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable

SECTION 15: REGULATORY INFORMATION

15.1	Safety, health and environmental regulations/ legislation specific for the substance or mixture	
	EU regulatory information	
	Additional information	To follow: 850/2004/EC, 79/117/EEC, 689/2008/EC
	National regulatory information	Water contaminating class (D): 2 - clearly water contaminating
15.2	Chemical safety assessment	Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: OTHER INFORMATION

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)
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
LC50:	Lethal concentration, 50%
LD50:	Lethal dose, 50%

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
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.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.
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.
H412	Harmful to aquatic life with long lasting effects.

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Moy Materials Ltd version prepared by	Martin Bidewell

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.