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

1.1. Product identifier

ENKE-Multi-Protect

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

Company name:	ENKE-Werk Johannes Enke GmbH & Co. KG	
Street:	Hamburger Str. 16	
Place:	D-40221 Düsseldorf	
Telephone:	+49(0)211/ 30 40 74	Telefax: +49(0)211/ 39 37 18
e-mail:	info@enke-werk.de	
Internet:	www.enke-werk.de	
Responsible Department:	On weekdays between 7 a.m. and 4 p.m.: +49(0)211/ 30 40 74	

1.4. Emergency telephone number:

Poison Information Centre (24h): +49 (0) 551 / 19 240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Directive 67/548/EEC or 1999/45/EC

Indications of danger: Xn - Harmful, Xi - Irritant
R phrases:
Flammable.
Harmful by inhalation and if swallowed.
Irritating to respiratory system.
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Repeated exposure may cause skin dryness or cracking.

Classification according to Regulation (EC) No. 1272/2008 [CLP]

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

Hazardous components which must be listed on the label

Hydrocarbons, C9, aromatics

Signal word:	Warning
Pictograms:	GHS02-GHS07

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 Dampf/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

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
REACH No		
	Hydrocarbons, C9, aromatics	< 25 %
	Xn - Harmful, Xi - Irritant, N - Dangerous for the environment R10-37-51-53-65-66-67	
	Flam. Liq. 3, STOT SE 3, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H226 H335 H336 H304 H411	
01-2119455851-35		
215-535-7	xylene	5 - 10 %
1330-20-7	Xn - Harmful, Xi - Irritant R10-20/21-38	
601-022-00-9	Flam. Liq. 3, Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2; H226 H332 H312 H315	
203-603-9	2-methoxy-1-methylethyl acetate	5 - 10 %
108-65-6	R10	
607-195-00-7	Flam. Liq. 3; H226	
202-849-4	ethylbenzene	< 3 %
100-41-4	F - Highly flammable, Xn - Harmful R11-20-48/20-65	
601-023-00-4	Flam. Liq. 2, Acute Tox. 4, STOT RE 2, Asp. Tox. 1; H225 H332 H373 H304	
	barium hydrogen phosphate	< 3 %
10048-98-3	Xn - Harmful R20/22	
	Acute Tox. 4, Acute Tox. 4; H302 H332	
215-222-5	zinc oxide	< 1 %
1314-13-2	N - Dangerous for the environment R50-53	
030-013-00-7	Aquatic Acute 1 (M-Factor = 1), Aquatic Chronic 1 (M-Factor = 1); H400 H410	

Full text of R-, H- and EUH-phrases: 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. powder or CO2 - Extinguisher, at larger fires foam or water spray jet

5.2. Special hazards arising from the substance or mixture

Vapours can form explosive mixtures with air. In case of fire, carbon monoxide , carbon dioxide and other harmful vapors and gases may be generated .

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

Remove 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

No special measures are necessary.

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. Avoid contact with skin and eyes and inhalation of vapors.

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	274		TWA (8 h)	WEL
		100	548		STEL (15 min)	WEL
100-41-4	Ethylbenzene	100	441		TWA (8 h)	WEL
		125	552		STEL (15 min)	WEL
1330-20-7	Xylene: mixed isomers	50	220		TWA (8 h)	WEL
		100	441		STEL (15 min)	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/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.
Chemical resistant protective gloves (EN 374). Suitable materials short-term contact or splashes (at least protection index 2, corresponding to > 30 minutes of permeation time according to EN 374) : Neoprene, PVC, butyl or nitrile rubber. Suitable materials for longer, direct contact (at least Protective index 6, corresponding > 480 minutes of permeation time according to EN 374) : Neoprene, Viton, PVC, butyl or nitrile rubber.

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:	silver grey
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 oxidizing.

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)	ca. 4000 mPa·s
Flow time: (at 20 °C)	250 s/ISO6-cup
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

None with proper handling and storage.

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 routes	Method	Dose	Species	Source
	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

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP].

SECTION 12: Ecological information

12.1. Toxicity

The product is not: Ecotoxic.

CAS No	Chemical name					
	Aquatic toxicity	Method	Dose	[h] | [d]	Species	Source
	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

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.
Disposal of packaging:
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 dangerous substances
Classified as 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 dangerous substances
Classified as 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)

Transport according to comment under paragraph 2.2.3.1.5

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

No information available.

14.7. Transport in bulk according to Annex II of MARPOL73/78 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 - 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 R-phrases (Number and full text)

10	Flammable.
11	Highly flammable.
20	Harmful by inhalation.
20/21	Harmful by inhalation and in contact with skin.
20/22	Harmful by inhalation and if swallowed.
37	Irritating to respiratory system.
38	Irritating to skin.
48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
50	Very toxic to aquatic organisms.
51	Toxic to aquatic organisms.
53	May cause long-term adverse effects in the aquatic environment.
65	Harmful: may cause lung damage if swallowed.
66	Repeated exposure may cause skin dryness or cracking.
67	Vapours may cause drowsiness and dizziness.

Relevant H- and EUH-phrases (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.

Further Information

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.

The current version of this safety data sheet is available on our website www.enke-werk.de/en

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)