


Safety Data Sheet

Universal Primer 2K, Component B

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

1.1	Product identifier	Universal Primer 2K, Component B
1.2	Relevant identified uses of the substance or mixture and uses advised against	
	Use of the substance/mixture:	2-component Primer / Adhesion promotor
	Uses advised against:	Do not use for sputtering or spraying.
1.3	Details of the supplier of the safety data sheet: Street: Place: Telephone: Telefax E-mail: Internet: Responsible department:	ENKE-Werk Johannes Enke GmbH & Co. KG Hamburger Str. 16 40221 Düsseldorf, Germany +49 (0)211 / 30 40 74 +49 (0)211 / 39 37 18 info@enke-werk.de www.enke-werk.de/en On weekdays between 7 a.m. and 4 p.m.
1.4	Emergency telephone number:	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
	Acute toxicity	Acute to. 4
	Acute toxicity	Acute to. 4
	Skin corrosion/irritation	Skin Irrit. 2
	Serious eye damage/eye irritation	Eye Irrit. 2
	Specific target organ toxicity – single exposure	STOT SE 3
	Specific target organ toxicity – repeated exposure	STOT SE 3
	Aspiration hazard:	Asp. Tox. 1
	Hazard Statements:	
	Flammable liquid and vapour.	
	May be fatal if swallowed and enters airways.	
	Harmful in contact with skin or if inhaled.	
	Causes skin irritation.	
	May cause an allergic skin reaction.	
	Causes serious eye irritation.	
	May cause respiratory irritation.	
	May cause damage to organs through prolonged or repeated exposure.	
2.2	Label elements	
	Regulation (EC) No. 1272/2008	
	Hazard components for labelling	
	Xylene	
	Hexamethylene diisocyanate, oligomerization	
	Signal word:	Danger
	Pictograms:	
	Hazard statements	
	H226	Flammable liquid and vapour.

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H304	May be fatal if swallowed and enters airways.
H312 + H332	Harmful in contact with skin or if inhaled.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
Precautionary statements	
P101	If medical advice is needed, have product container or label at hand.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P305 + P351 +P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P331	Do NOT induce vomiting.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
Special labelling of certain mixtures	
EUH204	Contains isocyanates. May produce an allergic reaction.
2.3 Other hazards	
No information available.	

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures			
Chemical characterization	Mixture based on an aliphatic polyisocyanates-prepolymer		
Hazardous components			
	CAS No	Chemical name	Quantity
		EC No	Index No
			REACH No
		Classification according to Regulation (EC) No. 1272/2008 [CLP]	
	1330-20-7	Xylene	70 - 90 %
		215-535-7	01-2119488216-32
		Flam. Liq. 3, Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1; H226 H332 H312 H315 H319 H335 H373 H304	
	28182-81-2	Hexamethylene diisocyanate, oligomerization	20 - 25 %
		500-060-2	01-2119488177-26
		Acute Tox. 3, Skin Sens. 1, STOT SE 3; H331 H317 H335	
Full text of H and EUH statements: see section 16.			

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SECTION 4: FIRST AID MEASURES

4.1	Description of first aid measures	
	General information	Take off immediately all contaminated clothing and wash it before reuse.
	After inhalation	Provide fresh air. When in doubt or if symptoms are observed, get medical advice.
	After contact with skin	Pick up mechanically and wash immediately with plenty of water and soap. If skin irritation or rash occurs: Get medical advice/attention.
	After contact with eyes	After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.
	After ingestion	Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Aspiration hazard! Call a physician in any case!
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. Do NOT induce vomiting. Aspiration hazard!

SECTION 5: FIREFIGHTING MEASURES

5.1	Extinguishing media	
	Suitable extinguishing media	Powder, Foam, Water spray jet, Carbon dioxide (CO ₂).
5.2	Special hazards arising from the substance or mixture	Flammable. Vapours can form explosive mixtures with air. In case of fire may be liberated: Carbon monoxide, Nitrogen oxides (NO _x); Possible in traces: Isocyanates, Hydrogen cyanide (hydrocyanic acid)
5.3	Advice for firefighters	Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.
	Additional information	Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. 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	Remove all sources of ignition. Provide adequate ventilation. 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 uncontrolled discharge of product into the environment. Danger of explosion
6.3	Methods and material for containment and cleaning up	Pick up mechanically. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or

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		universal binding agents). Put into waste containers after 1 hour. Fill collected, contaminated material into clean and labelled "open-top-drums". Do not seal gas-tight. Danger of burst! Keep humid and store safely in the open for 1-2 weeks. 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	If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Do not use for sputtering or spraying.
	Advice on protection against fire and explosion	Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air.
7.2	Conditions for safe storage, including any incompatibilities Requirements for storage rooms and vessels	Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	Further information on storage conditions	Maximum storage temperature: 30°C
7.3	Specific end use(s)	2-component Primer / Adhesion promotor

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1	Control parameters Exposure limits (EH40)						
	CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
	1330-20-7	Xylene: mixed isomers	50	220		TWA (8 h)	WEL
			100	44		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	
	DNEL/DMEL values						
	CAS No	Substance	Exposure route	Effect	Value		
	28182-81-2	Hexamethylene diisocyanate, oligomerization					
	Worker DNEL, long-term		inhalation	local	0,35 mg/m ³		
	Worker DNEL, acute		inhalation	local	0,7 mg/m ³		
	PNEC values						

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CAS No	Substance
Environmental compartment	Value
28182-81-2	Hexamethylene diisocyanate, oligomerization
Freshwater	> 0,05 mg/l
Marine water	> 0,005 mg/l
Freshwater sediment	> 1,33 mg/kg
Marine sediment	> 0,133 mg/kg
Micro-organisms in sewage treatment plants (STP)	55,6 mg/l
Soil	> 0,066 mg/kg

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	Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.
	Eye/face protection	Suitable eye protection: goggles.
	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. Fresh air mask. Short term filter device: A2 - P2.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1	Information on basic physical and chemical properties	
	Physical State	Liquid
	Colour	Colourless
	Odour	Characteristic
		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:	~ 30 °C
	Flammability	
	Solid:	not applicable
	Gas:	not applicable

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Lower explosion limits:	1,0 vol. %
Upper explosion limits:	8,0 vol. %
Ignition temperature	~ 480 °C
Auto-ignition temperature	
Solid:	not applicable
Gas:	not applicable
Decomposition temperature:	not determined
Oxidizing properties	
Not oxidising.	
Vapour pressure (at 20 °C):	0,5 - 1,0 hPa
Density (at 20 °C):	0,87 g/cm ³
Water solubility:	The study does not need to be conducted because the substance is known to be insoluble in water.
Solubility in other solvents	
not determined	
Partition coefficient:	not determined
Viscosity / dynamic: (at 20 °C)	20 - 30 mPa·s
Vapour density:	not determined
Evaporation rate:	not determined
9.2 Other information	
Solid content:	not determined

SECTION 10: STABILITY AND REACTIVITY

10.1	Reactivity	Flammable, Ignition hazard. Reacts with: Amines, Alcohols and Water
10.2	Chemical stability	The product is stable under storage at normal ambient temperatures. Above 90 °C can be released traces of hexamethylene diisocyanate.
10.3	Possibility of hazardous reactions	Exothermic reaction with: Amines, Alcohols; Reaction with water or humidity may form CO ₂ . Risk of bursting!
10.4	Conditions to avoid	Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.
10.5	Incompatible materials	No information available.
10.6	Hazardous decomposition products	No known hazardous decomposition products.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1	Information on toxicological effects																															
	Acute toxicity																															
	Harmful in contact with skin or if inhaled.																															
	ATEmix calculated																															
	ATE (dermal) 1428,6 mg/kg; ATE (inhalative vapour) 11,00 mg/l; ATE (inhalative aerosol) 1,027 mg/l																															
	<table border="1"> <thead> <tr> <th>CAS No</th> <th colspan="5">Chemical name</th> </tr> <tr> <th></th> <th>Exposure route</th> <th>Dose</th> <th>Species</th> <th>Source</th> <th>Method</th> </tr> </thead> <tbody> <tr> <td>1330-20-7</td> <td colspan="5">Xylene</td> </tr> <tr> <td></td> <td>dermal</td> <td>ATE mg/kg</td> <td>1100</td> <td></td> <td></td> </tr> <tr> <td></td> <td>inhalative vapour</td> <td>ATE</td> <td>11 mg/l</td> <td></td> <td></td> </tr> </tbody> </table>	CAS No	Chemical name						Exposure route	Dose	Species	Source	Method	1330-20-7	Xylene						dermal	ATE mg/kg	1100				inhalative vapour	ATE	11 mg/l			
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	inhalative aerosol	ATE	1,5 mg/l			
28182-81-2	Hexamethylene diisocyanate, oligomerization					
	oral	LD50 mg/kg	> 5665	Rat	OECD 401	
	dermal	LD50 mg/kg	> 2000	Rat		
	inhalative vapour	ATE	3 mg/l			
	inhalative (4 h) aerosol	LC50	0,51 mg/l	Rat	OECD 403	
Irritation and corrosivity		Causes skin irritation. Causes serious eye irritation.				
Sensitising effects		May cause an allergic skin reaction.				
STOT-single exposure		May cause respiratory irritation.				
STOT-repeated exposure		May cause damage to organs through prolonged or repeated exposure.				
Aspiration hazard		May be fatal if swallowed and enters airways.				
Additional information on tests		The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].				
Further information		Persons already sensitised to diisocyanates may develop allergic reactions when using this product. Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not be exposed to any process in which this product is used.				

SECTION 12: ECOLOGICAL INFORMATION

12.1	Toxicity	The product is not: Ecotoxic.				
	CAS No	Chemical name				
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
	28182-81-2	Hexamethylene diisocyanate, oligomerization				
	Acute fish toxicity	LC50 mg/l	> 100	96 h	Brachydanio rerio (zebrafish)	
	Acute algae toxicity	ErC50 100 mg/l	> 50 - < 100	72 h	Scenedesmus subspicatus	
	Acute crustacea toxicity	EC50 mg/l	> 100	48 h	Daphnia magna (Big water flea)	
	Acute bacteria toxicity	(5560 mg/l)			Activated sludge	OECD 209
12.2	Persistence and degradability	The product has not been tested.				
	CAS No	Chemical name				
		Method	Value	d	Source	
		Evaluation				
	28182-81-2	Hexamethylene diisocyanate, oligomerization				
		Guideline 67/548/EWG, Appendix V, C.4. E.		1 %	21	Test type: aerobic
		Not readily biodegradable				
		OECD- Test Guideline 302 C		18 %	28	Test type: aerobic
		Not readily biodegradable				
12.3	Bioaccumulative potential	The product has not been tested.				
	Partition coefficient n-octanol/water					
	CAS No	Chemical name				Log Pow

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	28182-81-2	Hexamethylene diisocyanate, oligomerization	6,62
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. 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	080501 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes not otherwise specified in 08; waste isocyanates; hazardous waste	
	Waste disposal number of used product	080501 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes not otherwise specified in 08; waste isocyanates; 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:	UN 1263
14.2	UN proper shipping name:	Paint
14.3	Transport hazard class(es):	3
14.4	Packing group:	III
	Hazard label:	3
	Classification code:	F1
	Special Provisions:	163 640E 650
	Limited quantity:	5L
	Excepted quantity:	E1
	Transport category:	3
	Hazard No:	30
	Tunnel restriction code:	D/E
Inland waterways transport (ADN)		
14.1	UN number:	UN 1263
14.2	UN proper shipping name:	Paint
14.3	Transport hazard class(es):	3
14.4	Packing group:	III
	Hazard label:	3

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	Classification code:	F1
	Special Provisions:	163 640E 650
	Limited quantity:	5L
	Excepted quantity:	E1
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 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	
	Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
	Water contaminating class (D):	2 - clearly water contaminating
	Skin resorption/Sensitisation:	Permeates easily through outer skin and causes poisoning.
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)

H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H312+H332	Harmful in contact with skin or if inhaled
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled
H332	Harmful if inhaled
H335	May cause respiratory irritation.

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H373	May cause damage to organs through prolonged or repeated exposure.
EUH204	Contains isocyanates. May produce an allergic reaction.
Last update date (ENKE-Werk) 02.08.2018	
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.	