SAFETY DATA SHEET

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2015/830

TRADEPUR STD

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

1.1. Product identifier

Product name : TradePUR STD
UFI : MM00-E0GF-S001-1579
Registration number REACH : Not applicable (mixture)
Product type REACH : Mixture

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

1.2.1 Relevant identified uses

Adhesive

1.2.2 Uses advised against

No uses advised against known

1.3. Details of the supplier of the safety data sheet

Supplier of the safety data sheet

Trade Grade Products Ltd
10 Victory Close
Woolsbridge Industrial Park
Three Legged Cross
Wimborne, Dorset, BH21 6SX
Tel: 01202 820177
sales@thegluepeople.co.uk

Manufacturer of the product

Trade Grade Products Ltd
10 Victory Close
Woolsbridge Industrial Park
Three Legged Cross
Wimborne, Dorset, BH21 6SX
Tel: 01202 820177
sales@thegluepeople.co.uk

1.4. Emergency telephone number

During office hours 01202 820177

24 Hours NPIS (UK) call 111 for NPIC (ireland) call +353 (0)1 809 2166 (24hr)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class	Category	Hazard statements
Carc.	category 2	H351: Suspected of causing cancer.
Resp. Sens.	category 1	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens.	category 1	H317: May cause an allergic skin reaction.
Acute Tox.	category 4	H332: Harmful if inhaled.
STOT RE	category 2	H373: May cause damage to organs through prolonged or repeated exposure if inhaled.
Skin Irrit.	category 2	H315: Causes skin irritation.
Eye Irrit.	category 2	H319: Causes serious eye irritation.
STOT SE	category 3	H335: May cause respiratory irritation.

2.2. Label elements

Contains: polymethylene polyphenyl isocyanate.

Signal word Danger

H-statements

H351 Suspected of causing cancer.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H332 Harmful if inhaled.
H373 May cause damage to organs through prolonged or repeated exposure if inhaled.
H315 Causes skin irritation.

H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

P-statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P280	Wear protective gloves, protective clothing and eye protection/face protection.
P284	Wear respiratory protection.
P260	Do not breathe vapours/mist.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P302 + P352	IF ON SKIN: Wash with plenty of water and soap.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P312	Call a POISON CENTER/doctor if you feel unwell.
P501	Dispose of contents/container in accordance with local/regional/national/international regulation.

Supplemental information

- Persons already sensitised to diisocyanates may develop allergic reactions when using this product.
- Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.
- This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

2.3. Other hazards

No other hazards known

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name REACH Registration No	CAS No EC No	Conc. (C)	Classification according to CLP	Note	Remark
xylene 01-2119488216-32	1330-20-7 215-535-7	1%<C<10%	Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315	(1)(2)(10)	Constituent
ethylbenzene 01-2119489370-35	100-41-4 202-849-4	1%<C<10%	Flam. Liq. 2; H225 Acute Tox. 4; H332 Asp. Tox. 1; H304 STOT RE 2; H373 Aquatic Chronic 3; H412	(1)(2)(6)(10)	Constituent
polymethylene polyphenyl isocyanate	9016-87-9	C>25 %	Carc. 2; H351 Resp. Sens. 1; H334 Skin Sens. 1; H317 Acute Tox. 4; H332 STOT RE 2; H373 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335	(1)(2)(8)(10)(18)	Polymer

(1) For H-statements in full: see heading 16
(2) Substance with a Community workplace exposure limit
(6) Enumerated in Annex VI of Regulation (EC) No. 1272/2008 but the classification has been adapted after evaluation of available test data
(8) Specific concentration limits, see heading 16
(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006
(18) Polymethylene polyphenyl isocyanate, contains > 0.1% MDI-isomers

SECTION 4: First aid measures

4.1. Description of first aid measures

General:

Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

After inhalation:

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

After skin contact:

Wash immediately with lots of water. Soap may be used. Take victim to a doctor if irritation persists.

After eye contact:

Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.

After ingestion:

Rinse mouth with water. Do not induce vomiting. Consult a doctor/medical service if you feel unwell.

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

4.2.1 Acute symptoms

After inhalation:

Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Runny nose. EXPOSURE TO HIGH CONCENTRATIONS: Central nervous system depression. Dizziness. Narcosis. Headache. Disturbances of consciousness.

After skin contact:

Tingling/irritation of the skin.

After eye contact:

Irritation of the eye tissue.

After ingestion:

AFTER INGESTION OF HIGH QUANTITIES: Central nervous system depression. Enlargement/affection of the liver. Symptoms similar to those listed under inhalation.

4.2.2 Delayed symptoms

No effects known.

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

If applicable and available it will be listed below.

SECTION 5: Firefighting measures

5.1. Extinguishing media

5.1.1 Suitable extinguishing media:

Small fire: Quick-acting ABC powder extinguisher, Quick-acting BC powder extinguisher, Quick-acting class B foam extinguisher, Quick-acting CO2 extinguisher.

Major fire: Class B foam (not alcohol-resistant).

5.1.2 Unsuitable extinguishing media:

Small fire: Water (quick-acting extinguisher, reel); risk of puddle expansion.

Major fire: Water; risk of puddle expansion.

5.2. Special hazards arising from the substance or mixture

On burning: release of toxic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide). On heating: release of toxic/combustible gases/vapours (hydrogen cyanide).

5.3. Advice for firefighters

5.3.1 Instructions:

If exposed to fire cool the closed containers by spraying with water. Do not move the load if exposed to heat. Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water.

5.3.2 Special protective equipment for fire-fighters:

Gloves. Face-shield. Protective clothing. Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No naked flames.

6.1.1 Protective equipment for non-emergency personnel

See heading 8.2

6.1.2 Protective equipment for emergency responders

Gloves. Face-shield. Protective clothing.

Suitable protective clothing

See heading 8.2

6.2. Environmental precautions

Contain released product. Dam up the liquid spill. Prevent spreading in sewers. Use appropriate containment to avoid environmental contamination.

6.3. Methods and material for containment and cleaning up

Allow product to solidify and remove it by mechanical means. Carefully collect the spill/leftovers. Clean (treat) contaminated surfaces with acetone. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4. Reference to other sections

See heading 13.

SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1. Precautions for safe handling

Keep away from naked flames/heat. Gas/vapour heavier than air at 20°C. Observe very strict hygiene - avoid contact. Keep container tightly closed. Remove contaminated clothing immediately. Do not discharge the waste into the drain.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements:

Store in a cool area. Meet the legal requirements. Max. storage time: 1 year(s).

7.2.2 Keep away from:

Heat sources, (strong) acids, (strong) bases.

7.2.3 Suitable packaging material:

Synthetic material.

7.2.4 Non suitable packaging material:

No data available

7.3. Specific end use(s)

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 Occupational exposure

a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

EU

Ethylbenzene	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	100 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	442 mg/m³
	Short time value (Indicative occupational exposure limit value)	200 ppm
	Short time value (Indicative occupational exposure limit value)	884 mg/m³
Xylene, mixed isomers, pure	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	50 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	221 mg/m³
	Short time value (Indicative occupational exposure limit value)	100 ppm
	Short time value (Indicative occupational exposure limit value)	442 mg/m³

Belgium

4,4'-Diisocyanate de diphénylméthane (MDI)	Time-weighted average exposure limit 8 h	0.005 ppm
	Time-weighted average exposure limit 8 h	0.052 mg/m³
Ethylbenzène	Time-weighted average exposure limit 8 h	100 ppm
	Time-weighted average exposure limit 8 h	442 mg/m³
	Short time value	125 ppm
	Short time value	551 mg/m³
Xylène, isomères mixtes, purs	Time-weighted average exposure limit 8 h	50 ppm
	Time-weighted average exposure limit 8 h	221 mg/m³
	Short time value	100 ppm
	Short time value	442 mg/m³

The Netherlands

Ethylbenzeen	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	49 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	215 mg/m³
	Short time value (Public occupational exposure limit value)	97 ppm
	Short time value (Public occupational exposure limit value)	430 mg/m³
Xyleen (o-,m- en p-isomeren)	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	48 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	210 mg/m³
	Short time value (Public occupational exposure limit value)	100 ppm
	Short time value (Public occupational exposure limit value)	442 mg/m³

France

4,4'-Diisocyanate de diphénylméthane	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	0.01 ppm
	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	0.1 mg/m³
	Short time value (VL: Valeur non réglementaire indicative)	0.02 ppm
	Short time value (VL: Valeur non réglementaire indicative)	0.2 mg/m³
Ethylbenzène	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	20 ppm
	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	88.4 mg/m³
	Short time value (VRC: Valeur réglementaire contraignante)	100 ppm
	Short time value (VRC: Valeur réglementaire contraignante)	442 mg/m³
Xylènes, isomères mixtes, purs	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	50 ppm
	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	221 mg/m³
	Short time value (VRC: Valeur réglementaire contraignante)	100 ppm
	Short time value (VRC: Valeur réglementaire contraignante)	442 mg/m³

Germany

4,4'-Methylendiphenyldiisocyanat	Time-weighted average exposure limit 8 h (TRGS 900)	0.05 mg/m³
Ethylbenzol	Time-weighted average exposure limit 8 h (TRGS 900)	20 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	88 mg/m³
pMDI (als MDI berechnet)	Time-weighted average exposure limit 8 h (TRGS 900)	0.05 mg/m³

UK

Ethylbenzene	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	100 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	441 mg/m³
	Short time value (Workplace exposure limit (EH40/2005))	125 ppm
	Short time value (Workplace exposure limit (EH40/2005))	552 mg/m³
Isocyanates, all (as -NCO) Except methyl isocyanate	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	0.02 mg/m³
	Short time value (Workplace exposure limit (EH40/2005))	0.07 mg/m³
Xylene, o-,m-,p- or mixed isomers	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	50 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	220 mg/m³
	Short time value (Workplace exposure limit (EH40/2005))	100 ppm
	Short time value (Workplace exposure limit (EH40/2005))	441 mg/m³

USA (TLV-ACGIH)

Ethyl benzene	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	20 ppm
Methylene bisphenyl isocyanate (MDI)	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	0.005 ppm
Xylene (all isomers)	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	100 ppm
	Short time value (TLV - Adopted Value)	150 ppm

b) National biological limit values

If limit values are applicable and available these will be listed below.

Germany

Ethylbenzol (Mandelsäure plus Phenylglyoxylsäure)	Urin: expositionsende, bzw. schichtende	250 mg/g Kreatinin	11/2016 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG

USA (BEI-ACGIH)

Ethyl benzene (Sum of mandelic acid and phenylglyoxylic acid)	Urine: end of shift	0,15 g/g creatinine	Nonspecific - Intended changes
Ethyl benzene (Sum of mandelic acid and phenylglyoxylic acid)	Urine: end of shift	0,15 mg/g creatinine	

8.1.2 Sampling methods

Product name	Test	Number
Ethyl Benzene (Hydrocarbons, Aromatic)	NIOSH	1501
Ethyl Benzene	OSHA	1002
Ethyl Benzene	OSHA	7
Isocyanates	NIOSH	5521
Isocyanates	NIOSH	5522
Xylene (Volatile Organic compounds)	NIOSH	2549

8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

8.1.4 DNEL/PNEC values

DNEL/DMEL - Workers

xylene

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	77 mg/m³	
	Acute systemic effects inhalation	289 mg/m³	
	Acute local effects inhalation	289 mg/m³	
	Long-term systemic effects dermal	180 mg/kg bw/day	

ethylbenzene

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	77 mg/m³	
	Acute local effects inhalation	293 mg/m³	
	Long-term systemic effects dermal	180 mg/kg bw/day	

DNEL/DMEL - General population

xylene

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	14.8 mg/m³	
	Acute systemic effects inhalation	174 mg/m³	
	Acute local effects inhalation	174 mg/m³	
	Long-term systemic effects dermal	108 mg/kg bw/day	
	Long-term systemic effects oral	1.6 mg/kg bw/day	

ethylbenzene

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	15 mg/m³	
	Long-term systemic effects oral	1.6 mg/kg bw/day	

PNEC

xylene

Compartments	Value	Remark
Fresh water	0.327 mg/l	
Marine water	0.327 mg/l	
STP	6.58 mg/l	
Fresh water sediment	12.46 mg/kg sediment dw	
Marine water sediment	12.46 mg/kg sediment dw	
Soil	2.31 mg/kg soil dw	

ethylbenzene

Compartments	Value	Remark
Fresh water	0.1 mg/l	
Marine water	0.01 mg/l	
Aqua (intermittent releases)	0.1 mg/l	
STP	9.6 mg/l	
Fresh water sediment	13.7 mg/kg sediment dw	
Marine water sediment	1.37 mg/kg sediment dw	
Soil	2.68 mg/kg soil dw	
Oral	0.02 g/kg food	

8.1.5 Control banding

If applicable and available it will be listed below.

8.2. Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

8.2.1 Appropriate engineering controls

Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

8.2.2 Individual protection measures, such as personal protective equipment

Observe very strict hygiene - avoid contact. Keep container tightly closed. Do not eat, drink or smoke during work.

a) Respiratory protection:

Full face mask with filter type A at conc. in air > exposure limit.

b) Hand protection:

Gloves.

c) Eye protection:

Face shield.

d) Skin protection:

Protective clothing.

8.2.3 Environmental exposure controls:

See headings 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical form	Liquid
Odour	Solvent-like odour
Odour threshold	No data available
Colour	Brown
Particle size	Not applicable (liquid)
Explosion limits	No data available
Flammability	Non-flammable
Log Kow	Not applicable (mixture)
Dynamic viscosity	No data available
Kinematic viscosity	No data available
Melting point	No data available
Boiling point	No data available
Evaporation rate	No data available
Relative vapour density	> 2
Vapour pressure	No data available
Solubility	Water ; insoluble
Relative density	1.1 ; 20 °C
Decomposition temperature	No data available
Auto-ignition temperature	No data available
Flash point	Not applicable
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	No data available

9.2. Other information

Absolute density	1100 kg/m³ ; 20 °C

SECTION 10: Stability and reactivity

10.1. Reactivity

Heating increases the fire hazard.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Reacts violently with (some) acids/bases.

10.4. Conditions to avoid

Precautionary measures

Keep away from naked flames/heat.

10.5. Incompatible materials

(strong) acids, (strong) bases.

10.6. Hazardous decomposition products

On heating: release of toxic/combustible gases/vapours (hydrogen cyanide). On burning: release of toxic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

11.1.1 Test results

Acute toxicity

TradePUR STD

No (test)data on the mixture available

Classification is based on the relevant ingredients

xylene

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to EU Method B.1	3523 mg/kg bw		Rat (male)	Experimental value	
Dermal			category 4			Annex VI	
Inhalation (vapours)			category 4			Annex VI	

Classification of this substance according to Annex VI is debatable as it does not correspond to the conclusion from the test

ethylbenzene

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50		3500 mg/kg		Rat (male/female)	Experimental value	
Dermal	LD50		15432 mg/kg	24 h	Rabbit (male)	Experimental value	
Inhalation (vapours)	LC50		17.8 mg/l	4 h	Rat (male)		

polymethylene polyphenyl isocyanate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50		> 10000 mg/kg		Rat	Literature study	
Dermal	LD50		> 5000 mg/kg		Rabbit	Literature study	
Inhalation (vapours)	LD50		10 mg/l - 20 mg/l	4 h	Rat	Literature study	
Inhalation			category 4			Literature study	

Conclusion

Harmful if inhaled.

Not classified as acute toxic in contact with skin

Not classified as acute toxic if swallowed

Corrosion/irritation

TradePUR STD

No (test)data on the mixture available

Classification is based on the relevant ingredients

xylene

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Moderately irritating	Draize Test		24; 48; 72 hours	Rabbit	Experimental value	
Skin	Moderately irritating	Draize Skin Test	24 h - 72 h	24; 72 hours	Rabbit	Experimental value	
Inhalation (vapours)	Irritating		4 h		Human		

Classification of this substance according to Annex VI is debatable as it does not correspond to the conclusion from the test

ethylbenzene

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Slightly irritating			7 days	Rabbit	Experimental value	
Skin	Moderately irritating		24 h	24 hours	Rabbit	Experimental value	

polymethylene polyphenyl isocyanate

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Irritating; category 2					Literature study	
Skin	Irritating; category 2					Literature study	
Inhalation	Irritating; STOT SE cat.3					Literature study	

Conclusion

Causes skin irritation.

Causes serious eye irritation.

May cause respiratory irritation.

Respiratory or skin sensitisation

TradePUR STD

No (test)data on the mixture available

Classification is based on the relevant ingredients

xylene

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	OECD 429			Mouse	Experimental value	

ethylbenzene

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin						Data waiving	

polymethylene polyphenyl isocyanate

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Sensitizing; category 1					Literature study	
Inhalation	Sensitizing; category 1					Literature study	

Conclusion

May cause an allergic skin reaction.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Specific target organ toxicity

TradePUR STD

No (test)data on the mixture available

Classification is based on the relevant ingredients

xylene

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	LOAEL	Equivalent to OECD 408	150 mg/kg bw/day	Liver	Weight gain	90 days (1x/day)	Rat (male)	Experimental value
Oral (stomach tube)	NOAEL	Equivalent to OECD 408	150 mg/kg bw/day	Liver	No effect	90 days (1x/day)	Rat (female)	Experimental value
Inhalation (vapours)	NOAEC	Subchronic toxicity test	≥ 3515 mg/m³		No effect	13 weeks (6h/day, 5 days/week)	Rat (male)	Experimental value

ethylbenzene

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	OECD 408	75 mg/kg bw/day	Liver	Enlargement/affection of the liver	13 week(s)	Rat (male/female)	Experimental value
Oral (stomach tube)	LOAEL	OECD 408	250 mg/kg bw/day	Liver	Enlargement/affection of the liver	13 week(s)	Rat (male/female)	Experimental value
Inhalation	NOAEL	Equivalent to OECD 413	1000 ppm		No effect	13 weeks (6h/day, 5 days/week)	Mouse (male/female)	Experimental value

Due to differences in metabolism the relevance for humans if swallowed is questioned

polymethylene polyphenyl isocyanate

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Inhalation			STOT RE cat.2					Literature study

Conclusion

May cause damage to organs through prolonged or repeated exposure if inhaled.

Mutagenicity (in vitro)

TradePUR STD

No (test)data on the mixture available

xylene

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic activation, negative without metabolic activation	Equivalent to EU Method B.10	Chinese hamster ovary (CHO)		Experimental value
Negative with metabolic activation, negative without metabolic activation	Equivalent to EU Method B.19	Chinese hamster ovary (CHO)		Experimental value

ethylbenzene

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 473	Chinese hamster ovary (CHO)	No effect	Experimental value

Mutagenicity (in vivo)

TradePUR STD

No (test)data on the mixture available

Judgement is based on the relevant ingredients

xylene

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	Equivalent to OECD 478		Mouse (male/female)		Experimental value

ethylbenzene

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	OECD 474		Mouse (male)		Experimental value

Conclusion

Not classified for mutagenic or genotoxic toxicity

Carcinogenicity

TradePUR STD

No (test)data on the mixture available

Classification is based on the relevant ingredients

xylene

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Oral	Dose level	Equivalent to EU Method B.32	≥ 500 mg/kg bw/day	103 weeks (5 days/week)	Rat (male/female)	No carcinogenic effect		Experimental value

ethylbenzene

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Inhalation (vapours)	NOAEC	Equivalent to OECD 453	250 ppm	104 weeks (6h/day, 5 days/week)	Rat (male/female)	No carcinogenic effect		Experimental value

polymethylene polyphenyl isocyanate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Unknown			category 2					Literature study

Conclusion

Suspected of causing cancer.

Reproductive toxicity

TradePUR STD

No (test)data on the mixture available

Judgement is based on the relevant ingredients

xylene

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEC	Equivalent to OECD 414	100 ppm	15 days (6h/day)	Rat (male/female)	No effect		Experimental value
Maternal toxicity	NOAEC	OECD 414	500 ppm	15 days (6h/day)	Rat	No effect		Experimental value
Effects on fertility	NOAEC (P)	EPA OPPTS 870.3800	≥ 500 ppm	70 days (6h/day)	Rat (male/female)	No effect		Experimental value
	NOAEC (F1)	EPA OPPTS 870.3800	≥ 500 ppm	70 days (6h/day)	Rat (male/female)	No effect		Experimental value

ethylbenzene

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEC	OECD 414	500 ppm	15 days (gestation, daily)	Rat (female)	No effect	Foetus	Experimental value
Maternal toxicity	NOAEC	OECD 414	500 ppm	15 days (gestation, daily)	Rat	No effect		Experimental value
Effects on fertility	NOAEC (P/F1/F2)	OECD 416	500 ppm	70 days (6h/day)	Rat (male/female)	No effect		Experimental value

Conclusion

Not classified for reprotoxic or developmental toxicity

Toxicity other effects

TradePUR STD

No (test)data on the mixture available

Chronic effects from short and long-term exposure

TradePUR STD

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Dry skin. Itching. Skin rash/inflammation. Respiratory difficulties.

SECTION 12: Ecological information

12.1. Toxicity

TradePUR STD

No (test)data on the mixture available

Judgement of the mixture is based on the relevant ingredients

xylene

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	2.6 mg/l	96 h	Oncorhynchus mykiss	Static system	Fresh water	Read-across; Lethal
Acute toxicity crustacea	EC50		3.82 mg/l	48 h	Daphnia magna	Flow-through system	Fresh water	Read-across
Toxicity algae and other aquatic plants	EC50	OECD 201	4.36 mg/l	73 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Growth rate
Long-term toxicity fish	NOEC		> 1.3 mg/l	56 day(s)	Oncorhynchus mykiss	Flow-through system	Fresh water	Experimental value; Lethal
Long-term toxicity aquatic crustacea	NOEC	US EPA	1.17 mg/l	7 day(s)	Ceriodaphnia dubia		Fresh water	Read-across; Reproduction

ethylbenzene

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	4.2 mg/l	96 h	Salmo gairdneri	Semi-static system	Fresh water	Experimental value
Acute toxicity crustacea	EC50	US EPA	1.8 mg/l - 2.4 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value
Toxicity algae and other aquatic plants	EC50	OECD 201	4.6 mg/l	72 h	Selenastrum capricornutum			Experimental value; Growth rate
Long-term toxicity fish	ChV	ECOSAR v1.00	1.13 mg/l	30 day(s)	Pisces			QSAR
Long-term toxicity aquatic crustacea	NOEC	US EPA	1 mg/l	7 day(s)	Ceriodaphnia dubia	Semi-static system	Fresh water	Experimental value; Reproduction
Toxicity aquatic micro-organisms	EC50		96 mg/l	24 h	Nitrosomonas			Experimental value

polymethylene polyphenyl isocyanate

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity other aquatic organisms	LC50		> 1000 mg/l	96 h				Literature study
Toxicity aquatic micro-organisms	EC50	OECD 209	> 100 mg/l		Activated sludge			Literature study

Conclusion

Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008

12.2. Persistence and degradability

xylene

Biodegradation water

Method	Value	Duration	Value determination
OECD 301: Ready Biodegradability	100 %	12 day(s)	Experimental value

ethylbenzene

Biodegradation water

Method	Value	Duration	Value determination
ISO 14593	70 % - 80 %; GLP	28 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
	2.3 day(s)	500000 /cm³	Literature study

polymethylene polyphenyl isocyanate

Biodegradation water

Method	Value	Duration	Value determination
OECD 302C: Inherent Biodegradability: Modified MITI Test (II)	< 60 %		Experimental value

Conclusion

Contains non readily biodegradable component(s)

12.3. Bioaccumulative potential

TradePUR STD

Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

xylene

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		7 - 26	8 week(s)	Oncorhynchus mykiss	Experimental value

Log Kow

Method	Remark	Value	Temperature	Value determination
		3.2	20 °C	Conclusion by analogy

ethylbenzene

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		1	6 week(s)	Oncorhynchus kisutch	Literature study

BCF other aquatic organisms

Parameter	Method	Value	Duration	Species	Value determination
BCF		4.68		Lamellibranchiata	Literature study

Log Kow

Method	Remark	Value	Temperature	Value determination
EU Method A.8		3.6	20 °C	Experimental value

polymethylene polyphenyl isocyanate

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		1		Pisces	Literature study

Log Kow

Method	Remark	Value	Temperature	Value determination
	No data available			

Conclusion

Contains bioaccumulative component(s)

12.4. Mobility in soil

ethylbenzene

(log) Koc

Parameter	Method	Value	Value determination
log Koc	PCKOCWIN v1.66	2.71	QSAR

Conclusion

Contains component(s) with potential for mobility in the soil

Contains component(s) that adsorb(s) into the soil

12.5. Results of PBT and vPvB assessment

Does not contain component(s) that meet(s) the criteria of PBT and/or vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006.

12.6. Other adverse effects

TradePUR STD

Fluorinated greenhouse gases (Regulation (EU) No 517/2014)

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

xylene

Groundwater

Groundwater pollutant

SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1. Waste treatment methods

13.1.1 Provisions relating to waste

European Union

Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.
Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).
08 04 09* (wastes from MFSU of adhesives and sealants (including waterproofing products): waste adhesives and sealants containing organic solvents or other hazardous substances). Depending on branch of industry and production process, also other waste codes may be applicable.

13.1.2 Disposal methods

Incinerate under surveillance with energy recovery. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Do not discharge into drains or the environment.

13.1.3 Packaging/Container

European Union

Waste material code packaging (Directive 2008/98/EC).
15 01 10* (packaging containing residues of or contaminated by dangerous substances).

SECTION 14: Transport information

Road (ADR), Rail (RID), Inland waterways (ADN), Sea (IMDG/IMSBC), Air (ICAO-TI/IATA-DGR)

14.1. UN number

Transport	Not subject

14.2. UN proper shipping name

14.3. Transport hazard class(es)

Hazard identification number	
Class	
Classification code	

14.4. Packing group

Packing group	
Labels	

14.5. Environmental hazards

Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	
Limited quantities	

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

Annex II of MARPOL 73/78	Not applicable, based on available data

SECTION 15: Regulatory information

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

European legislation:

VOC content Directive 2010/75/EU

VOC content	Remark
4.266 % - 8.16 %	
46.926 g/l - 89.76 g/l	

Indicative occupational exposure limit values (Directive 98/24/EC, 2000/39/EC and 2009/161/EU)

Product name	Skin resorption
Ethylbenzene	Skin
Xylene, mixed isomers, pure	Skin

REACH Annex XVII - Restriction

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

	Designation of the substance, of the group of substances or of the mixture	Conditions of restriction
· ethylbenzene · polymethylene polyphenyl isocyanate	Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard	1. Shall not be used in: — ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, — tricks and jokes,

	classes or categories set out in Annex I to Regulation (EC) No 1272/2008: (a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F; (b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10; (c) hazard class 4.1; (d) hazard class 5.1.	— games for one or more participants, or any article intended to be used as such, even with ornamental aspects, 2. Articles not complying with paragraph 1 shall not be placed on the market. 3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they: — can be used as fuel in decorative oil lamps for supply to the general public, and, — present an aspiration hazard and are labelled with R65 or H304, 4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN). 5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met: a) lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil — or even sucking the wick of lamps — may lead to life- threatening lung damage"; b) grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: "Just a sip of grill lighter may lead to life threatening lung damage"; c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010. 6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public. 7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.'
· xylene · ethylbenzene	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to that Regulation or not.	1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following: — metallic glitter intended mainly for decoration, — artificial snow and frost, — "whoopee" cushions, — silly string aerosols, — imitation excrement, — horns for parties, — decorative flakes and foams, — artificial cobwebs, — stink bombs. 2. Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with: "For professional users only". 3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/ 324/EEC. 4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated.
· polymethylene polyphenyl isocyanate	Methylenediphenyl diisocyanate (MDI) including the following specific isomers: 4,4'-Methylenediphenyl diisocyanate; 2,4'-Methylenediphenyl diisocyanate; 2,2'-Methylenediphenyl diisocyanate	1. Shall not be placed on the market after 27 December 2010, as a constituent of mixtures in concentrations equal to or greater than 0,1 % by weight of MDI for supply to the general public, unless suppliers shall ensure before the placing on the market that the packaging: (a) contains protective gloves which comply with the requirements of Council Directive 89/686/EEC; (b) is marked visibly, legibly and indelibly as follows, and without prejudice to other Community legislation concerning the classification, packaging and labelling of substances and mixtures: "— Persons already sensitised to diisocyanates may develop allergic reactions when using this product. — Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. — This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used. 2. By way of derogation, paragraph 1(a) shall not apply to hot melt adhesives.

National legislation Belgium

TradePUR STD

No data available

xylene

Résorption peau	Xylène, isomères mixtes, purs; D; La mention "D" signifie que la résorption de l'agent, via la peau, les muqueuses ou les yeux, constitue une partie importante de l'exposition totale. Cette résorption peut se faire tant par contact direct que par présence de l'agent dans l'air.

ethylbenzene

Résorption peau	Ethylbenzène; D; La mention “D” signifie que la résorption de l’agent, via la peau, les muqueuses ou les yeux, constitue une partie importante de l’exposition totale. Cette résorption peut se faire tant par contact direct que par présence de l’agent dans l’air.

National legislation The Netherlands

TradePUR STD

Waterbezwaarlijkheid	B (3)

xylene

Huidopname (wettelijk)	Xyleen (o-,m- en p-isomeren); H
SZW - Lijst van voor de voortplanting giftige stoffen (ontwikkeling)	xyleen; 2; Suspected of damaging the unborn child.

ethylbenzene

Huidopname (wettelijk)	Ethylbenzeen; H

National legislation France

TradePUR STD

No data available

xylene

Risque de pénétration percutanée	Xylènes, isomères mixtes, purs; PP

ethylbenzene

Risque de pénétration percutanée	Ethylbenzène; PP

polymethylene polyphenyl isocyanate

Catégorie cancérogène	4,4'-Diisocyanate de diphénylméthane; C2

National legislation Germany

TradePUR STD

WGK	2; Classification water polluting based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 4) and Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) of 18 April 2017

xylene

TA-Luft	5.2.5; I

ethylbenzene

TA-Luft	5.2.5; I
TRGS900 - Risiko der Fruchtschädigung	Ethylbenzol; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden
Hautresorptive Stoffe	Ethylbenzol; H; Hautresorptiv

polymethylene polyphenyl isocyanate

TA-Luft	5.2.5; I
TRGS900 - Risiko der Fruchtschädigung	4,4'-Methylendiphenyldiisocyanat; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden
	pMDI (als MDI berechnet); Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden
Sensibilisierende Stoffe	4,4'-Methylendiphenyldiisocyanat; Sah; Atemwegssensibilisierende Stoffe Und Hautsensibilisierende Stoffe, an beiden Zielorganen Allergien auslösende
	pMDI (als MDI berechnet); Sa; Atemwegssensibilisierende Stoffe
TRGS905 - Krebserzeugend	Techn. ("Polymeres") MDI (pMDI) (in Form atembarer Aerosole, A-Fraktion); 2
TRGS905 - Erbgutverändernd	Techn. ("Polymeres") MDI (pMDI) (in Form atembarer Aerosole, A-Fraktion); -
TRGS905 - Fruchtbarkeitsgefährdend	Techn. ("Polymeres") MDI (pMDI) (in Form atembarer Aerosole, A-Fraktion); -
TRGS905 - Fruchtschädigend	Techn. ("Polymeres") MDI (pMDI) (in Form atembarer Aerosole, A-Fraktion); -
Hautresorptive Stoffe	4,4'-Methylendiphenyldiisocyanat; H; Hautresorptiv
	pMDI (als MDI berechnet); H; Hautresorptiv

National legislation United Kingdom

TradePUR STD

No data available

xylene

Skin absorption	Xylene, o-,m-,p- or mixed isomers; Sk

ethylbenzene

Skin absorption	Ethylbenzene; Sk

polymethylene polyphenyl isocyanate

Skin Sensitisation	Isocyanates, all (as -NCO) Except methyl isocyanate; Sen
Respiratory sensitisation	Isocyanates, all (as -NCO) Except methyl isocyanate; Sen

Other relevant data

TradePUR STD

No data available

xylene

IARC - classification	3; Xylenes
TLV - Carcinogen	Xylene (all isomers); A4

ethylbenzene

IARC - classification	2B; Ethylbenzene
TLV - Carcinogen	Ethyl benzene; A3

polymethylene polyphenyl isocyanate

IARC - classification	3; Polymethylene polyphenyl isocyanate

15.2. Chemical safety assessment

No chemical safety assessment has been conducted for the mixture.

SECTION 16: Other information

Full text of any H-statements referred to under heading 3:

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.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure if inhaled.
H373 May cause damage to organs (ears (hearing damage)) through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.

(*)	INTERNAL CLASSIFICATION BY BIG
CLP (EU-GHS)	Classification, labelling and packaging (Globally Harmonised System in Europe)
DMEL	Derived Minimal Effect Level
DNEL	Derived No Effect Level
EC50	Effect Concentration 50 %
ErC50	EC50 in terms of reduction of growth rate
LC50	Lethal Concentration 50 %
LD50	Lethal Dose 50 %
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent, Bioaccumulative & Toxic
PNEC	Predicted No Effect Concentration
STP	Sludge Treatment Process
vPvB	very Persistent & very Bioaccumulative

Specific concentration limits CLP

polymethylene polyphenyl isocyanate	C ≥ 5 %	Eye Irrit 2;H319	analogous to Annex VI
	C ≥ 5 %	Skin Irrit 2;H315	analogous to Annex VI
	C ≥ 0.1 %	Resp Sens 1;H334	analogous to Annex VI
	C ≥ 5 %	STOT SE 3;H335	analogous to Annex VI

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