Safety Data Sheet

According to Annex II to REACH - Regulation 2015/830

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

1.1. Product identifier

Code:	**TWS-FASTCOAT**
Product name	TRITON **FASTCOAT**

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

Intended use	**Polyurethane waterproof coating for roofs, decks, terraces etc.**

1.3. Details of the supplier of the safety data sheet

Name	**TRITON SYSTEMS**
Full address	**3-5 CRAYFORD COMMERCIAL CENTRE, GREYHOUND WAY, CRAYFORD DA1 4HF**
District and Country	KENT, UK.
	Tel. 01322 318830
e-mail address of the competent person responsible for the Safety Data Sheet	info@tritonsystems.co.uk

1.4. Emergency telephone number

For urgent inquiries refer to	**United Kingdom**
	999/112 emergency
	111 non-emergency medical number

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2015/830.
Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this document.

Hazard classification and indication:

Flammable liquid, category 3	H226	Flammable liquid and vapour.
Eye irritation, category 2	H319	Causes serious eye irritation.
Skin irritation, category 2	H315	Causes skin irritation.
Respiratory sensitization, category 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitization, category 1	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment, chronic toxicity, category 3	H412	Harmful to aquatic life with long lasting effects.

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:

Signal words: Danger

Hazard statements:

H226 Flammable liquid and vapour.

SECTION 2. Hazards identification ... / >>

H319	Causes serious eye irritation.
H315	Causes skin irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.
EUH204	Contains isocyanates. May produce an allergic reaction.
EUH205	Contains epoxy constituents. May produce an allergic reaction.

Precautionary statements:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing dust / fume / gas / mist / vapours / spray.
P280	Wear protective gloves/ protective clothing / eye protection / face protection.
P342+P311	If experiencing respiratory symptoms: call a POISON CENTER.
P304+P340	IF INHALED: remove person to fresh air and keep comfortable for breathing.
P370+P378	In case of fire: use carbon dioxide, sand, foam or powder to extinguish.

Contains: METHYLENEDIPHENYL DIISOCYANATE
AROMATIC POLYISOCYANATE PREPOLYMER
BENZOYL CHLORIDE

As from 24 August 2023 adequate training is required before industrial or professional use.

VOC (Directive 2004/42/EC) :
One - pack performance coatings.
VOC given in g/litre of product in a ready-to-use condition: 224.58
Limit value: 500.00

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.

SECTION 3. Composition/information on ingredients

3.1. Substances

Information not relevant

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
AROMATIC POLYISOCYANATE PREPOLYMER		
CAS *37273-56-6*	18 ≤ x < 19,5	**Eye Irrit. 2 H319, Skin Sens. 1 H317**
EC *609-378-7*		
INDEX		
XYLENE (MIXTURE OF ISOMERS)		
CAS *1330-20-7*	8,5 ≤ x < 10	**Flam. Liq. 3 H226, Acute Tox. 4 H312, Acute Tox. 4 H332, Asp. Tox. 1 H304, STOT RE 2 H373, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Aquatic Chronic 3 H412, Classification note/notes according to Annex VI to the CLP Regulation: C**
EC *215-535-7*		
INDEX *601-022-00-9*		
Reg. no. *01-2119488216-32*		
REACTION PRODUCTS OF PHOSPHORYL TRICHLORIDE AND 2-METHYLOXIRANE		
CAS *1244733-77-4*	4 ≤ x < 4,5	**Acute Tox. 4 H302**
EC *807-935-0*		
INDEX		
Reg. no. *01-2119486772-26*		
HYDROCARBONS, C9, AROMATICS		
CAS *64742-95-6*	2,5 ≤ x < 3	**Flam. Liq. 3 H226, Asp. Tox. 1 H304, STOT SE 3 H335, STOT SE 3 H336, Aquatic Chronic 2 H411**
EC *918-668-5*		
INDEX		
Reg. no. *01-2119455851-35*		

SECTION 3. Composition/information on ingredients ... / >>

N,N-DIBENZYLIDEN POLYOXYPROPYLENE DIAMINE (POLYMER)
CAS *136855-71-5* 2 ≤ x < 2,5 **Skin Irrit. 2 H315**
EC *679-523-7*
INDEX

TOLUENE
CAS *108-88-3* 1 ≤ x < 1,5 **Flam. Liq. 2 H225, Repr. 2 H361d, Asp. Tox. 1 H304, STOT RE 2 H373, Skin Irrit. 2 H315, STOT SE 3 H336, Aquatic Chronic 3 H412**
EC *203-625-9*
INDEX *601-021-00-3*
Reg. no. *01-2119471310-51*

ISOBUTYL ACETATE
CAS *110-19-0* 1 ≤ x < 1,5 **Flam. Liq. 2 H225, STOT SE 3 H336, EUH066, Classification note/notes according to Annex VI to the CLP Regulation: C**
EC *203-745-1*
INDEX *607-026-00-7*
Reg. no. *01-2119488971-22*

METHYLENEDIPHENYL DIISOCYANATE
CAS *26447-40-5* 0,5 ≤ x < 0,6 **Carc. 2 H351, Acute Tox. 4 H332, STOT RE 2 H373, Eye Irrit. 2 H319, Skin Irrit. 2 H315 , STOT SE 3 H335, Resp. Sens. 1 H334, Skin Sens. 1 H317, EUH204**
EC *247-714-0*
INDEX *615-005-00-9*
Reg. no. *01-2119457015-45*

ANTIMONY TRIOXIDE
CAS *1309-64-4* 0,25 ≤ x < 0,3 **Carc. 2 H351**
EC *215-175-0*
INDEX *051-005-00-X*
Reg. no. *01-2119475613-35*

N-BUTYL ACETATE
CAS *123-86-4* 0,25 ≤ x < 0,3 **Flam. Liq. 3 H226, STOT SE 3 H336, EUH066**
EC *204-658-1*
INDEX *607-025-00-1*
Reg. no. *01-2119485493-29*

ETHYL ACETATE
CAS *141-78-6* 0,1 ≤ x < 0,15 **Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066**
EC *205-500-4*
INDEX *607-022-00-5*
Reg. no. *01-2119475103-46*

BENZOYL CHLORIDE
CAS *98-88-4* 0,1 ≤ x < 0,15 **Acute Tox. 3 H331, Acute Tox. 4 H302, Acute Tox. 4 H312, Skin Corr. 1B H314, Eye Dam. 1 H318, Skin Sens. 1 H317**
EC *202-710-8*
INDEX *607-012-00-0*
Reg. no. *01-2119487138-29*

1,4-BIS(2,3-EPOXYPROPOXY)BUTANE
CAS *2425-79-8* 0,1 ≤ x < 0,15 **Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 4 H332, Eye Dam. 1 H318, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 3 H412**
EC *219-371-7*
INDEX *603-072-00-7*
Reg. no. *01-2119494060-45*

PHOSPHORIC ACID
CAS *7664-38-2* 0 ≤ x < 0,05 **Met. Corr. 1 H290, Skin Corr. 1B H314, Eye Dam. 1 H318, Classification note/notes according to Annex VI to the CLP Regulation: B**
EC *231-633-2*
INDEX *015-011-00-6*
Reg. no. *01-2119485924-24*

The full wording of hazard (H) phrases is given in section 16 of the sheet.

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Remove contact lenses if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.
SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.
INGESTION: Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.
INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

SECTION 4. First aid measures ... / >>

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT
Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.
UNSUITABLE EXTINGUISHING EQUIPMENT
Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION
Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS
Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.
Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

Send away individuals who are not suitably equipped. Use explosion-proof equipment. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.
Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. When performing transfer operations involving large containers, connect to an earthing system and wear antistatic footwear. Vigorous

SECTION 7. Handling and storage ... / >>

stirring and flow through the tubes and equipment may cause the formation and accumulation of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Store in a cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

DEU	Deutschland	Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56
ESP	España	Límites de exposición profesional para agentes químicos en España 2019
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
FIN	Suomi	HTP-VÄRDEN 2020. Koncentrationer som befunnits skadliga. SOCIAL - OCH HÄLSOVÅRDSMINISTERIETS PUBLIKATIONER 2020:25
GRC	Ελλάδα	Π.Δ. 26/2020 (ΦΕΚ 50/Α` 6.3.2020) Εναρμόνιση της ελληνικής νομοθεσίας προς τις διατάξεις των οδηγιών 2017/2398/ΕΕ, 2019/130/ΕΕ και 2019/983/ΕΕ «για την τροποποίηση της οδηγίας 2004/37/ΕΚ ''σχετικά με την προστασία των εργαζομένων από τους κινδύνους που συνδέονται με την έκθεση σε καρκινογόνους ή μεταλλαξιγόνους παράγοντες κατά την εργασία''»
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
LTU	Lietuva	Lietuvos higienos norma HN 23:2011 „Cheminių medžiagų profesinio poveikio ribiniai dydžiai: Matavimo ir poveikio vertinimo bendrieji reikalavimai“ (įsakymo nauja redakcija nuo 2018 08 21 pagal LR SAM ir LR SADM 2018 06 12 įsakymą Nr. V-695/A1-272)
NLD	Nederland	Arbeidsomstandighedenregeling. Lijst van wettelijke grenswaarden op grond van de artikelen 4.3, eerste lid, en 4.16, eerste lid, van het Arbeidsomstandighedenbesluit
PRT	Portugal	Decreto-Lei n.º 1/2021 de 6 de janeiro, valores-limite de exposição profissional indicativos para os agentes químicos. Decreto-Lei n.º 35/2020 de 13 de julho, proteção dos trabalhadores contra os riscos ligados à exposição durante o trabalho a agentes cancerígenos ou mutagénicos
POL	Polska	Rozporządzenie Ministra Rodziny, Pracy i Polityki Społecznej z dnia 12 czerwca 2018 r. w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy
ROU	România	Hotararea 157/2020 pentru modificarea Hotărârii Guvernului nr. 1.218/2006 privind stabilirea cerinţelor minime de securitate şi sănătate în muncă pentru asigurarea protecţiei lucrătorilor împotriva riscurilor legate de prezenţa agenţilor chimici, precum şi pentru modificarea şi completarea Hotărârii Guvernului nr. 1.093/2006 privind stabilirea cerinţelor minime de securitate şi sănătate pentru protecţia lucrătorilor împotriva riscurilor legate de expunerea la agenţi cancerigeni sau mutageni la locul de muncă
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
EU	OEL EU	Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2020

SECTION 8. Exposure controls/personal protection

... / >>

XYLENE (MIXTURE OF ISOMERS)

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
AGW	DEU	440	100	880	200	SKIN
MAK	DEU	440	100	880	200	SKIN
VLA	ESP	221	50	442	100	SKIN
VLEP	FRA	221	50	442	100	SKIN
HTP	FIN	220	50	440	100	SKIN
TLV	GRC	435	100	650	150	
VLEP	ITA	221	50	442	100	SKIN
RD	LTU	221	50	442	100	SKIN
TGG	NLD	210		442		SKIN
VLE	PRT	221	50	442	100	SKIN
NDS/NDSCh	POL	100		200		SKIN
TLV	ROU	221	50	442	100	SKIN
WEL	GBR	220	50	441	100	SKIN
OEL	EU	221	50	442	100	SKIN
TLV-ACGIH		434	100	651	150	

ISOBUTYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	300	62	600 (C)	124 (C)	
VLA	ESP	724	150			
VLEP	FRA	710	150	940	200	
TLV	GRC	950	200	950	200	
TGG	NLD	480				
VLE	PRT	241	50	723	150	
NDS/NDSCh	POL	240		720		
TLV	ROU	715	150	950	200	
WEL	GBR	724	150	903	187	
OEL	EU	241	50	723	150	
TLV-ACGIH			50		150	

TOLUENE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm		
AGW	DEU	190	50	760	200	SKIN	
MAK	DEU	190	50	760	200	SKIN	
VLA	ESP	192	50	384	100	SKIN	
VLEP	FRA	76,8	20	384	100	SKIN	
HTP	FIN	81	25	380	100	SKIN	Buller
TLV	GRC	192	50	384	100		
VLEP	ITA	192	50			SKIN	
RD	LTU	192	50	384	100	SKIN	
TGG	NLD	150		384			
VLE	PRT	192	50	384	100	SKIN	
NDS/NDSCh	POL	100		200		SKIN	
TLV	ROU	192	50	384	100	SKIN	
WEL	GBR	191	50	384	100	SKIN	
OEL	EU	192	50	384	100	SKIN	
TLV-ACGIH		75,4	20				

SECTION 8. Exposure controls/personal protection ... / >>

N-BUTYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	300	62	600 (C)	124 (C)	
VLA	ESP	724	150	965	200	
VLEP	FRA	710	150	940	200	
TLV	GRC	710	150	950	200	
RD	LTU	500	100	700	150	
TGG	NLD	150				
VLE	PRT	241	50	723	150	
NDS/NDSCh	POL	240		720		
TLV	ROU	715	150	950	200	
WEL	GBR	724	150	966	200	
OEL	EU	241	50	723	150	
TLV-ACGIH			50		150	

ETHYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h				Remarks / Observations
		mg/m3	ppm			
AGW	DEU	730	200	1460	400	
MAK	DEU	750	200	1500	400	
VLA	ESP	734	200	1468	400	
VLEP	FRA	734	200	1468	400	
HTP	FIN	730	200	1470	400	
TLV	GRC	734	200	1468	400	
RD	LTU	500	150	1100 (C)	300 (C)	
TGG	NLD	734		1468		
VLE	PRT	734	200	1468	400	
NDS/NDSCh	POL	734		1468		
TLV	ROU	400	111	500	139	
WEL	GBR	734	200	1468	400	
OEL	EU	734	200	1468	400	
TLV-ACGIH		1441	400			

PHOSPHORIC ACID

Threshold Limit Value

Type	Country	TWA/8h				Remarks / Observations
		mg/m3	ppm			
AGW	DEU	2		4 (C)		INHAL
MAK	DEU	2		4		INHAL
VLA	ESP	1		2		
VLEP	FRA	1	0,2	2	0,5	
HTP	FIN	1		2		
TLV	GRC	1		3		
VLEP	ITA	1		2		
RD	LTU	1		2		
TGG	NLD	1		2		
VLE	PRT	1		2		
NDS/NDSCh	POL	1		2		
TLV	ROU	1		2		
WEL	GBR	1		2		
OEL	EU	1		2		
TLV-ACGIH		1		3		

Legend:
(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.
When choosing personal protective equipment, ask your chemical substance supplier for advice.
Personal protective equipment must be CE marked, showing that it complies with applicable standards.
Provide an emergency shower with face and eye wash station.
HAND PROTECTION

SECTION 8. Exposure controls/personal protection ... / >>

Protect hands with category III work gloves (see standard EN 374). The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.
The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION
Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.
Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.
EYE PROTECTION
Wear airtight protective goggles (see standard EN 166).
RESPIRATORY PROTECTION
If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.
Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.
If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.
ENVIRONMENTAL EXPOSURE CONTROLS
The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.
Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	liquid	
Colour	see section 1	
Odour	characteristic	
Odour threshold	Not available	
pH	Not applicable	
Melting point / freezing point	Not available	
Initial boiling point	115 °C	
Boiling range	Not available	
Flash point	31 °C	Method:Closed cup
Evaporation Rate	Not available	
Flammability of solids and gases	not applicable	
Lower inflammability limit	Not available	
Upper inflammability limit	Not available	
Lower explosive limit	Not available	
Upper explosive limit	Not available	
Vapour pressure	Not available	
Vapour density	Not available	
Relative density	1,5 g/cm3	Temperature:20°C
Solubility	reacts with water developing carbon dioxide	
Partition coefficient: n-octanol/water	Not applicable	
Auto-ignition temperature	Not available	
Decomposition temperature	Not available	
Viscosity	18000 mPa*s	Temperature:20°C
Explosive properties	not expected	
Oxidising properties	not expected	

9.2. Other information

Total solids (250°C / 482°F)	84,52 %			
VOC (Directive 2004/42/EC) :	14,97 %	-	224,58	g/litre
VOC (volatile carbon) :	10,72 %	-	160,79	g/litre

SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

AROMATIC POLYISOCYANATE PREPOLYMER
Reacts with: water,amines,alcohols.
ISOBUTYL ACETATE
Decomposes under the effect of heat.Attacks various types of plastic materials.
TOLUENE
Avoid exposure to: light.
METHYLENEDIPHENYL DIISOCYANATE
In the air absorbs moisture.
Reacts with: water,alcohols,amines.
N-BUTYL ACETATE
Decomposes on contact with: water.
ETHYL ACETATE
Decomposes slowly into acetic acid and ethanol under the effect of light, air and water.

PHOSPHORIC ACID
Decomposes at temperatures above 200°C/392°F.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

AROMATIC POLYISOCYANATE PREPOLYMER
Reacts violently developing heat on contact with: amines.
On contact with: water.Develops: carbon dioxide.
XYLENE (MIXTURE OF ISOMERS)
Stable in normal conditions of use and storage.Reacts violently with: strong oxidants,strong acids,nitric acid,perchlorates.May form explosive mixtures with: air.
ISOBUTYL ACETATE
Risk of explosion on contact with: strong oxidising agents.May react violently with: alkaline hydroxides,potassium tert-butoxide.Forms explosive mixtures with: air.
TOLUENE
Risk of explosion on contact with: fuming sulphuric acid,nitric acid,silver perchlorate,nitrogen dioxide,non-metal halogenates,acetic acid,organic nitrocompounds.May form explosive mixtures with: air.May react dangerously with: strong oxidising agents,strong acids,sulphur.
METHYLENEDIPHENYL DIISOCYANATE
Polymerises developing heat on contact with: alcohols,amines.
On contact with: water.Develops: carbon dioxide.
N-BUTYL ACETATE
Risk of explosion on contact with: strong oxidising agents.May react dangerously with: alkaline hydroxides,potassium tert-butoxide.Forms explosive mixtures with: air.
ETHYL ACETATE
Risk of explosion on contact with: alkaline metals,hydrides,oleum.May react violently with: fluorine,strong oxidising agents,chlorosulphuric acid,potassium tert-butoxide.Forms explosive mixtures with: air.
PHOSPHORIC ACID
Risk of explosion on contact with: nitromethane.May react dangerously with: alkalis,sodium borohydride.

10.4. Conditions to avoid

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

ISOBUTYL ACETATE
Avoid exposure to: sources of heat,naked flames.
N-BUTYL ACETATE
Avoid exposure to: moisture,sources of heat,naked flames.
ETHYL ACETATE
Avoid exposure to: light,sources of heat,naked flames.

10.5. Incompatible materials

AROMATIC POLYISOCYANATE PREPOLYMER
Avoid contact with: water,acids,alkalis,alcohols,amines,strong oxidising agents.

SECTION 10. Stability and reactivity ... / >>

ISOBUTYL ACETATE
Incompatible with: strong oxidants,nitrates,strong acids,strong bases.
METHYLENEDIPHENYL DIISOCYANATE
Avoid contact with: water,alcohols,amines.
N-BUTYL ACETATE
Incompatible with: water,nitrates,strong oxidants,acids,alkalis,zinc.
ETHYL ACETATE
Incompatible with: acids,bases,strong oxidants,aluminium,nitrates,chlorosulphuric acid.Incompatible materials: plastic materials.
PHOSPHORIC ACID
Incompatible with: metals,strong alkalis,aldehydes,organic sulphides,peroxides.

10.6. Hazardous decomposition products

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

AROMATIC POLYISOCYANATE PREPOLYMER
In decomposition develops: nitric oxide,carbon oxides.
METHYLENEDIPHENYL DIISOCYANATE
In decomposition develops: cyanides,carbon oxides,nitric oxide.
PHOSPHORIC ACID
May develop: phosphoryl oxides.

SECTION 11. Toxicological information

11.1. Information on toxicological effects

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

XYLENE (MIXTURE OF ISOMERS)
WORKERS: inhalation; contact with the skin.
POPULATION: ingestion of contaminated food or water; inhalation of ambient air.

TOLUENE
WORKERS: inhalation; contact with the skin.
POPULATION: ingestion of contaminated food or water; inhalation of ambient air; contact with the skin of products containing the substance.

N-BUTYL ACETATE
WORKERS: inhalation; contact with the skin.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

XYLENE (MIXTURE OF ISOMERS)
Toxic effect on the central nervous system (encephalopathy); irritating for the skin, conjunctiva, cornea and respiratory apparatus.

TOLUENE
Toxic effect on the central and peripheral nervous system with encephalopathy and polyneuritis; irritating for the skin, conjunctiva, cornea and respiratory apparatus.

N-BUTYL ACETATE
In humans, the substance's vapours cause irritation of the eyes and nose. In the event of repeated exposure, skin irritation, dermatitis (dryness and cracking of the skin) and keratitis appear.

Interactive effects

XYLENE (MIXTURE OF ISOMERS)
Intake of alcohol interferes with the metabolism of the substance, inhibiting it. Ethanol consumption (0.8 g/kg) before a 4-hour exposure to xylene vapours (145 and 280 ppm) causes a 50% reduction in the excretion of methyl hippuric acid, whereas the concentration of xylenes in the blood increases approx. 1.5-2 times. At the same time there is an increase in the secondary side effects of the ethanol. The metabolism of the xylenes is increased by phenobarbital and 3-methyl-colantrene type enzyme inducers. Aspirin and xylenes mutually inhibit their conjugation with the glycine, which results in a decrease in urinary excretion of methyl hippuric acid. Other industrial products can interfere with the metabolism of xylenes.

TOLUENE
Certain drugs and other industrial products can interfere with the metabolism of the toluene.

SECTION 11. Toxicological information ... / >>

N-BUTYL ACETATE
A case of acute intoxication been reported involving a 33 year old worker while cleaning a tank with a preparation containing xylenes, butyl acetate and ethylene glycol acetate. The person had irritation of the conjunctiva and upper respiratory tract, drowsiness and motor coordination disorders, which disappeared within 5 hours. The symptoms are attributed to poisoning by mixed xylenes and butyl acetate, with a possible synergistic effect responsible for the neurological effects. Cases of vacuolar keratitis are reported in workers exposed to a mixture of butyl acetate and isobutanol vapours, but with uncertainty concerning the responsibility of a particular solvent (INRC, 2011).

ACUTE TOXICITY

ATE (Inhalation) of the mixture:	> 20 mg/l
ATE (Oral) of the mixture:	>2000 mg/kg
ATE (Dermal) of the mixture:	>2000 mg/kg

1,4-BIS(2,3-EPOXYPROPOXY)BUTANE

LD50 (Oral)	1163 mg/kg OECD Guideline 401, Rat- Wistar
LD50 (Dermal)	> 2150 mg/kg OECD Guideline 402, Rat

REACTION PRODUCTS OF PHOSPHORYL TRICHLORIDE AND 2-METHYLOXIRANE

LD50 (Oral)	> 500 mg/kg

PHOSPHORIC ACID

LD50 (Oral)	1530 mg/kg Rat
LD50 (Dermal)	2740 mg/kg Rabbit
LC50 (Inhalation)	> 0,85 mg/l/1h Rat

XYLENE (MIXTURE OF ISOMERS)

LD50 (Oral)	3523 mg/kg Rat
LD50 (Dermal)	4350 mg/kg Rabbit
LC50 (Inhalation)	26 mg/l/4h Rat

TOLUENE

LD50 (Oral)	5580 mg/kg Rat
LD50 (Dermal)	12124 mg/kg Rabbit
LC50 (Inhalation)	28,1 mg/l/4h Rat

N-BUTYL ACETATE

LD50 (Oral)	> 6400 mg/kg Rat
LD50 (Dermal)	> 5000 mg/kg Rabbit
LC50 (Inhalation)	21,1 mg/l/4h Rat

SKIN CORROSION / IRRITATION

Causes skin irritation

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin
Sensitising for the respiratory system

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

XYLENE (MIXTURE OF ISOMERS)
Classified in Group 3 (not classifiable as a human carcinogen) by the International Agency for Research on Cancer (IARC). The US Environmental Protection Agency (EPA) affirms that "the data is inadequate for an assessment of the carcinogenic potential".

TOLUENE

SECTION 11. Toxicological information ... / >>

Classified in Group 3 (not classifiable as a human carcinogen) by the International Agency for Research on Cancer (IARC) - (IARC, 1999).The US Environmental Protection Agency (EPA) affirms that "the data is inadequate for an assessment of the carcinogenic potential".

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class Viscosity: 18000 mPa*s

SECTION 12. Ecological information

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment.

12.1. Toxicity

1,4-BIS(2,3-EPOXYPROPOXY)BUTANE	
LC50 - for Fish	19,8 mg/l/96h OECD Guideline 203, Danio rerio
EC50 - for Crustacea	75 mg/l/48h OECD Guideline 202, Daphnia magna
EC50 - for Algae /Aquatic Plants	160 mg/l/72h OECD Guideline 201, Pseudokirchneriella subcapitata
HYDROCARBONS, C9, AROMATICS	
LC50 - for Fish	9,2 mg/l/96h OECD Guideline 203, Oncorhynchus mykiss
EC50 - for Crustacea	3,2 mg/l/48h OECD Guideline 202, Daphnia magna
EC50 - for Algae /Aquatic Plants	2,6 mg/l/72h OECD Guideline 201, Pseudokirchneriella subcapitata
XYLENE (MIXTURE OF ISOMERS)	
LC50 - for Fish	2,6 mg/l/96h
EC50 - for Crustacea	1,1 mg/l/48h
EC50 - for Algae /Aquatic Plants	1,3 mg/l/72h
TOLUENE	
LC50 - for Fish	5,5 mg/l/96h
EC50 - for Crustacea	3,78 mg/l/48h
EC50 - for Algae /Aquatic Plants	134 mg/l/72h

12.2. Persistence and degradability

PHOSPHORIC ACID	
Solubility in water	> 850000 mg/l
Degradability: information not available	
XYLENE (MIXTURE OF ISOMERS)	
Solubility in water	100 - 1000 mg/l
Degradability: information not available	
TOLUENE	
Solubility in water	100 - 1000 mg/l
Rapidly degradable	
ETHYL ACETATE	
Solubility in water	> 10000 mg/l
Rapidly degradable	

SECTION 12. Ecological information ... / >>

N-BUTYL ACETATE
Solubility in water 1000 - 10000 mg/l

ISOBUTYL ACETATE
Solubility in water 1000 - 10000 mg/l
Rapidly degradable

12.3. Bioaccumulative potential

XYLENE (MIXTURE OF ISOMERS)
Partition coefficient: n-octanol/water 3,12
BCF 25,9

TOLUENE
Partition coefficient: n-octanol/water 2,73
BCF 90

ETHYL ACETATE
Partition coefficient: n-octanol/water 0,68
BCF 30

N-BUTYL ACETATE
Partition coefficient: n-octanol/water 2,3
BCF 15,3

ISOBUTYL ACETATE
Partition coefficient: n-octanol/water 2,3
BCF 15,3

12.4. Mobility in soil

XYLENE (MIXTURE OF ISOMERS)
Partition coefficient: soil/water 2,73

N-BUTYL ACETATE
Partition coefficient: soil/water < 3

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.

12.6. Other adverse effects

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.
Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
Waste transportation may be subject to ADR restrictions.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information

14.1. UN number

ADR / RID, IMDG, IATA: 1263

SECTION 14. Transport information ... / >>

14.2. UN proper shipping name

ADR / RID:	PAINT
IMDG:	PAINT
IATA:	PAINT

14.3. Transport hazard class(es)

ADR / RID:	Class: 3	Label: 3	
IMDG:	Class: 3	Label: 3	
IATA:	Class: 3	Label: 3	

14.4. Packing group

ADR / RID, IMDG, IATA: III

14.5. Environmental hazards

ADR / RID:	NO
IMDG:	NO
IATA:	NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 30 Special provision: -	Limited Quantities: 5 L	Tunnel restriction code: (D/E)
IMDG:	EMS: F-E, S-E	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 220 L	Packaging instructions: 366
	Pass.:	Maximum quantity: 60 L	Packaging instructions: 355
	Special provision:	A3, A72, A192	

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

Information not relevant

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EC: P5c

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product

Point	3 - 40	

Contained substance

Point	75	CALCIUM CARBONATE Reg. no.: 01-2119486795-18
Point	75	XYLENE (MIXTURE OF ISOMERS) Reg. no.: 01-2119488216-32
Point	75	TITANIUM DIOXIDE Reg. no.: 01-2119489379-17
Point	75	HYDROCARBONS, C9, AROMATICS Reg. no.: 01-2119455851-35
Point	48-75	TOLUENE Reg. no.: 01-2119471310-51
Point	56-75	METHYLENEDIPHENYL DIISOCYANATE Reg. no.: 01-2119457015-45
Point	75	ACIDO BENZOICO Reg. no.: 01-2119455536-33

SECTION 15. Regulatory information ... / >>

Point	75	ANTIMONY TRIOXIDE Reg. no.: 01-2119475613-35
Point	75	BENZOYL CHLORIDE Reg. no.: 01-2119487138-29
Point	75	1,4-BIS(2,3-EPOXYPROPOXY)BUTANE Reg. no.: 01-2119494060-45
Point	75	TOLUENE-2,4-DI-ISOCYANATE Reg. no.: 01-2119486974-18
Point	75	OSSIDO DI FERRO MONOIDRATO Reg. no.: 01-2119457554-33
Point	75	CARBON BLACK Reg. no.: 01-2119384822-32
Point	75	PHOSPHORIC ACID Reg. no.: 01-2119485924-24
Point	74	DIISOCYANATES

Regulation (EC) No. 2019/1148 - on the marketing and use of explosives precursors
Not applicable

Substances in Candidate List (Art. 59 REACH)
On the basis of available data, the product does not contain any SVHC in percentage ≥ than 0,1%.

Substances subject to authorisation (Annex XIV REACH)
None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:
None

Substances subject to the Rotterdam Convention:
None

Substances subject to the Stockholm Convention:
None

Healthcare controls
Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

VOC (Directive 2004/42/EC) :
One - pack performance coatings.

15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flam. Liq. 2	Flammable liquid, category 2
Flam. Liq. 3	Flammable liquid, category 3
Met. Corr. 1	Substance or mixture corrosive to metals, category 1
Carc. 2	Carcinogenicity, category 2
Repr. 2	Reproductive toxicity, category 2
Acute Tox. 3	Acute toxicity, category 3
Acute Tox. 4	Acute toxicity, category 4
Asp. Tox. 1	Aspiration hazard, category 1
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
Skin Corr. 1B	Skin corrosion, category 1B
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Resp. Sens. 1	Respiratory sensitization, category 1
Skin Sens. 1	Skin sensitization, category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.

SECTION 16. Other information ... / >>

H290	May be corrosive to metals.
H351	Suspected of causing cancer.
H361d	Suspected of damaging the unborn child.
H331	Toxic if inhaled.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H304	May be fatal if swallowed and enters airways.
H373	May cause damage to organs through prolonged or repeated exposure.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH204	Contains isocyanates. May produce an allergic reaction.
EUH205	Contains epoxy constituents. May produce an allergic reaction.

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY
1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
4. Regulation (EU) 2015/830 of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)

SECTION 16. Other information ... / >>

13. Regulation (EU) 2017/776 (X Atp. CLP)14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2018/1480 (XIII Atp. CLP)
16. Regulation (EU) 2019/521 (XII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Regulation (EU) 2020/217 (XIV Atp. CLP)

- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website

Note for users:
The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.

CALCULATION METHODS FOR CLASSIFICATION
Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.
Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.
Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes to previous review:
The following sections were modified:
PB 08.07.22