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: **B280**
Product name **CAT. B 28**

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

Identified Uses	Industrial	Professional	Consumer
Hardner for varnishes	-	✓	-

1.3. Details of the supplier of the safety data sheet

Name **VERINLEGNO S.p.A.**
Full address **Via Luigi Galvani, 7**
District and Country **51010 Massa e Cozzile (PT)**
Italia
Tel. +39 0572 / 9271.1
Fax +39 0572 / 773608
e-mail address of the competent person responsible for the Safety Data Sheet **ambientesicurezza@verinlegno.it**

1.4. Emergency telephone number

For urgent inquiries refer to **Ing. Cialdoni Annamaria:**
+ 39 0572 927120 (dalle ore 08:00 alle ore 12.00 e dalle ore 14:00 alle ore 18:00)

National Poisons Information Service (NPIS)
Mail. director.birmingham.unit@npis.org

REACH and CLP UK CA Help Desk Health and Safety Executive (HSE)
5S.1 Redgrave Court, Merton Road, Bootle, Merseyside. L20 7HS
Mail. ukreachca@hse.gov.uk

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 sheet.

Hazard classification and indication:

Flammable liquid, category 2	H225	Highly flammable liquid and vapour.
Aspiration hazard, category 1	H304	May be fatal if swallowed and enters airways.
Specific target organ toxicity - repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.
Eye irritation, category 2	H319	Causes serious eye irritation.
Skin irritation, category 2	H315	Causes skin irritation.
Specific target organ toxicity - single exposure, category 3	H335	May cause respiratory 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.
Specific target organ toxicity - single exposure, category 3	H336	May cause drowsiness or dizziness.

SECTION 2. Hazards identification ... / >>

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:

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H373	May cause damage to organs through prolonged or repeated exposure.
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.
EUH204	Contains isocyanates. May produce an allergic reaction.
EUH208	Contains: TOLUENE-2,4-DI-ISOCYANATE TOSYL ISOCYANATE May produce an allergic reaction.

Precautionary statements:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P331	Do NOT induce vomiting.
P261	Avoid breathing dust / fume / gas / mist / vapours / spray.
P280	Wear protective gloves/ protective clothing / eye protection / face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER / doctor
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER / doctor

Contains:
XILENE (MISCELA DI ISOMERI)
ALIPHATIC POLYISOCYANATE
TOLUENE-2,4-DI-ISOCYANATE
N-BUTYL ACETATE

Product not intended for uses provided for by Dir. 2004/42/CE.

2.3. Other hazards

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

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
N-BUTYL ACETATE		
CAS 123-86-4	28,5 ≤ x < 30	**Flam. Liq. 3 H226, STOT SE 3 H336, EUH066**
EC 204-658-1		
INDEX 607-025-00-1		
Reg. no. 01-2119485493-29		

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

XILENE (MISCELA DI ISOMERI)
CAS *1330-20-7* 23,5 ≤ x < 25 **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**
EC *215-535-7*
INDEX *601-022-00-9*
Reg. no. *01-2119488216-32*

ETHYL ACETATE
CAS *141-78-6* 18,5 ≤ x < 20 **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*

ALIPHATIC POLYISOCYANATE
CAS *28182-81-2* 8 ≤ x < 9 **Acute Tox. 4 H332, Resp. Sens. 1 H334, Skin Sens. 1 H317**
EC
INDEX
Reg. no. *01-2119488934-20-0000*

2-METHOXY-1-METHYLETHYL ACETATE
CAS *108-65-6* 1 ≤ x < 1,5 **Flam. Liq. 3 H226**
EC *203-603-9*
INDEX *607-195-00-7*
Reg. no. *01-2119475791-29*

TOSYL ISOCYANATE
CAS *4083-64-1* 0,65 ≤ x < 0,75 **Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Resp. Sens. 1 H334, EUH014**
EC *223-810-8*
INDEX *615-012-00-7*

ETHYLBENZENE
CAS *100-41-4* 0,25 ≤ x < 0,3 **Flam. Liq. 2 H225, Acute Tox. 4 H332, Asp. Tox. 1 H304, STOT RE 2 H373**
EC *202-849-4*
INDEX *601-023-00-4*
Reg. no. *01-2119489370-35*

TOLUENE-2,4-DI-ISOCYANATE
CAS *91-08-7* 0,1 ≤ x < 0,15 **Carc. 2 H351, Acute Tox. 2 H330, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335 , Resp. Sens. 1 H334, Skin Sens. 1 H317, Aquatic Chronic 3 H412, Classification note according to Annex VI to the CLP Regulation: 2 C**
EC *202-039-0*
INDEX *615-006-00-4*

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: Have the subject drink as much water as possible. 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.

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

SECTION 5. Firefighting measures ... / >>

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

Ensure that there is an adequate earthing system for the equipment and personnel. Avoid contact with eyes and skin. Do not breathe powders, vapours or mists. Do not eat, drink or smoke during use. Wash hands after use. Avoid leakage of the product into the environment.

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. 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.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a ventilated and dry place, far away from sources of ignition. Keep containers well sealed. Keep the product in clearly labelled containers. Avoid overheating. Avoid violent blows. Keep containers away from any incompatible materials, see section 10 for details.

Store in a well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

CZE	Česká Republika	Nařízení vlády č. 246/2018 Sb. Nařízení vlády, kterým se mění nařízení vlády č. 361/2007 Sb., kterým se stanoví podmínky ochrany zdraví při práci, ve znění pozdějších předpisů
DEU	Deutschland	TRGS 900 (Fassung 07.06.2018) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte
DNK	Danmark	Bekendtgørelse om ændring af bekendtgørelse om grænseværdier for stoffer og materialer1- BEK nr 655 af 31/05/2018
ESP	España	LÍMITES DE EXPOSICIÓN PROFESIONAL PARA AGENTES QUÍMICOS EN ESPAÑA 2008 NIPO: 211-08-011-5
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Third edition,published 2018)
GRC	Ελλάδα	ΕΦΗΜΕΡΙΔΑ ΤΗΣ ΚΥΒΕΡΝΗΣΕΩΣ - ΤΕΥΧΟΣ ΠΡΩΤΟ Αρ. Φύλλου 152 - 21 Αυγούστου 2018
HRV	Hrvatska	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 91/18)
HUN	Magyarország	A pénzügyminiszter 7/2018. (VIII. 29.) PM rendelete a munkahelyek kémiai biztonságáról szóló 25/2000. (IX. 30.) EüM–SZCSM együttes rendelet módosításáról
ITA	Italia	DIRETTIVA (UE) 2017/164 DELLA COMMISSIONE del 31 gennaio 2017
LTU	Lietuva	LIETUVOS HIGIENOS NORMA HN 23:2011 „CHEMINIŲ MEDŽIAGŲ PROFESINIO POVEIKIO RIBINIAI DYDŽIAI. MATAVIMO IR POVEIKIO VERTINIMO BENDRIEJI REIKALAVIMAI. Nr. V-695/A1-272, 2018-06-12, paskelbta TAR 2018-06-15, i. k. 2018-09988
NLD	Nederland	Regeling van de Staatssecretaris van Sociale Zaken en Werkgelegenheid van 13 juli 2018, 2018-0000118517 tot wijziging van de Arbeidsomstandighedenregeling in verband met de implementatie van Richtlijn 2017/164 in Bijlage XIII
POL	Polska	ROZPORZĄDZENIE MINISTRA RODZINY, PRACY I POLITYKI SPOŁECZNEJ z dnia 12 czerwca 2018 r
PRT	Portugal	Ministério da Economia e do Emprego Consolida as prescrições mínimas em matéria de protecção dos trabalhadores contra os riscos para a segurança e a saúde devido à exposição a agentes químicos no trabalho - Diário da República, 1.ª série - N.º 111 - 11 de junho de 2018
ROU	România	HOTĂRÂRE nr. 584 din 2 august 2018 pentru modificarea Hotărârii Guvernului nr. 1.218/2006 privind stabilirea cerințelor minime de securitate și sănătate în muncă pentru asigurarea protecției lucrătorilor împotriva riscurilor legate de prezența agenților chimici
SVK	Slovensko	Nariadenie vlády č. 33/2018 Z. z. Nariadenie vlády Slovenskej republiky, ktorým sa mení a dopĺňa nariadenie vlády Slovenskej republiky č. 355/2006 Z. z. o ochrane zamestnancov pred rizikami súvisiacimi s expozíciou chemickým faktorom pri práci v znení neskorších predpisov
EU	OEL EU	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 91/322/EEC.
	TLV-ACGIH	ACGIH 2019

N-BUTYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
TLV	CZE	950	200,45	1200	253,2
AGW	DEU	300	62	600	124
TLV	DNK	710	150		
VLA	ESP	724	150	965	200
VLEP	FRA	710	150	940	200
WEL	GBR	724	150	966	200
TLV	GRC	710	150	950	200
GVI/KGVI	HRV	724	150	966	200
AK	HUN	950		950	
RD	LTU	500	100	700	150
TGG	NLD	150			
NDS/NDSCh	POL	240		720	
TLV	ROU	715	150	950	200
NPEL	SVK	500	100	700	150
TLV-ACGIH			50		150

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

XILENE (MISCELA DI ISOMERI)

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min			
		mg/m3	ppm	mg/m3	ppm		
TLV	CZE	200		400			
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	
WEL	GBR	220	50	441	100		
TLV	GRC	435	100	650	150		Regulatory reference: DGFASLI
GVI/KGVI	HRV	221	50	442	100	SKIN	
AK	HUN	221		442		SKIN	
TGG	NLD	210		442		SKIN	
NDS/NDSCh	POL	100					
NPEL	SVK	221	50	442		SKIN	
OEL	EU	221	50	442	100	SKIN	
TLV-ACGIH		434	100	651	150		

ETHYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
TLV	CZE	700	194,6	900	250,2
AGW	DEU	730	200	1460	400
MAK	DEU	750	200	1500	400
TLV	DNK	540	150		
VLA	ESP	734	200	1468	400
VLEP	FRA	1400	400		
WEL	GBR	734	200	1468	400
TLV	GRC	734	200	1468	400
GVI/KGVI	HRV	734	200	1468	400
AK	HUN	734		1468	
VLEP	ITA	734	200	1468	400
RD	LTU	500	150	1100 (C)	300 (C)
TGG	NLD	734		1468	
NDS/NDSCh	POL	734		1468	
VLE	PRT	734	200	1468	400
TLV	ROU	400	111	500	139
NPEL	SVK	734	200	1468	400
OEL	EU	734	200	1468	400
TLV-ACGIH		1441	400		

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

2-METHOXY-1-METHYLETHYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min			
		mg/m3	ppm	mg/m3	ppm		
TLV	CZE	270	49,95	550	101,75	SKIN	
AGW	DEU	270	50	270	50		
MAK	DEU	270	50	270	50		
TLV	DNK	275	50			SKIN	E
VLA	ESP	275	50	550	100	SKIN	
VLEP	FRA	275	50	550	100	SKIN	
WEL	GBR	274	50	548	100	SKIN	
TLV	GRC	275	50	550	100		
GVI/KGVI	HRV	275	50	550	100	SKIN	
AK	HUN	275		550			
VLEP	ITA	275	50	550	100	SKIN	
RD	LTU	250	50	400	75	SKIN	
TGG	NLD	550					
NDS/NDSCh	POL	260		520		SKIN	
VLE	PRT	275	50	550	100	SKIN	
TLV	ROU	275	50	550	100	SKIN	
NPEL	SVK	275	50	550	100	SKIN	
OEL	EU	275	50	550	100	SKIN	

TOSYL ISOCYANATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
WEL	GBR	0,02		0,07		AS NCO
GVI/KGVI	HRV	0,02		0,07		Kao NCO

ETHYLBENZENE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min			
		mg/m3	ppm	mg/m3	ppm		
TLV	CZE	200	46	500	115	SKIN	
MAK	DEU	88	20	176	40	SKIN	
TLV	DNK	217	50			SKIN	E
VLA	ESP	441	100	884	200	SKIN	
VLEP	FRA	88,4	20	442	100	SKIN	
WEL	GBR	441	100	552	125	SKIN	
TLV	GRC	435	100	545	125		
GVI/KGVI	HRV	442	100	884	200	SKIN	
AK	HUN	442		884		SKIN	
VLEP	ITA	442	100	884	200	SKIN	
RD	LTU	442	100	884	200	SKIN	
TGG	NLD	215		430		SKIN	
NDS/NDSCh	POL	200		400		SKIN	
VLE	PRT	442	100	884	200	SKIN	
TLV	ROU	442	100	884	200	SKIN	
NPEL	SVK	442	100	884	200	SKIN	
OEL	EU	442	100	884	200	SKIN	
TLV-ACGIH		87	20				

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

TOLUENE-2,4-DI-ISOCYANATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	0,05	0,007	0,1	0,014	
AGW	DEU	0,035	0,005	0,035 (C)	0,005 (C)	11, 12
TLV	DNK	0,035	0,005			
TLV	GRC	0,07		0,14		
AK	HUN			0,035 (C)		
TGG	NLD	0,04	5	0,15	20	
NDS/NDSCh	POL	0,007		0,021		
TLV-ACGIH			0,001		0,005	SKIN

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

N-BUTYL ACETATE
Regulatory Reference, Ministry of Labour & Employment, Government of India (DGFASLI): TWA (8 hrs) 150 ppm - 710 mg/m3 STEL (15 min) 200 ppm - 950 mg/m3.

XILENE (MISCELA DI ISOMERI)
Regulatory Reference, Ministry of Labour & Employment, Government of India (DGFASLI): TWA (8 hrs) 100 ppm - 435 mg/m3 STEL (15 min) 150 ppm - 655 mg/m3.

ETHYL ACETATE
Regulatory Reference, Ministry of Labour & Employment, Government of India (DGFASLI): TWA (8 hrs) 400 ppm - 1,400 mg/m3.

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.
Exposure levels must be kept as low as possible to avoid significant build-up in the organism. Manage personal protective equipment so as to guarantee maximum protection (e.g. reduction in replacement times).
HAND 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, wear a mask with a type AX filter, whose limit of use will be defined by the manufacturer (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.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	liquid	
Colour	colourless	

SECTION 9. Physical and chemical properties ... / >>

Odour		characteristic
Odour threshold		Not available
pH		Not available
Melting point / freezing point		Not available
Initial boiling point	>	35 °C
Boiling range		79/146 °C
Flash point	<	23 °C
Evaporation rate		Not available
Flammability (solid, gas)		Not available
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		> 1
Relative density		0,964 +/- 0,020 Kg/Lt
Solubility		soluble in organic solvents
Partition coefficient: n-octanol/water		Not available
Auto-ignition temperature		Not available
Decomposition temperature		Not available
Viscosity		48"+/- 3" DIN 2 (20°C)
Explosive properties		Not available
Oxidising properties		Not available

9.2. Other information

Total solids (250°C / 482°F)	23,50 %			
VOC (Directive 2010/75/EC) :	75,92 %	-	731,89	g/litre
VOC (volatile carbon) :	52,57 %	-	506,79	g/litre

SECTION 10. Stability and reactivity

10.1. Reactivity

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.

2-METHOXY-1-METHYLETHYL ACETATE
Stable in normal conditions of use and storage.
With the air it may slowly develop peroxides that explode with an increase in temperature.

TOLUENE-2,4-DI-ISOCYANATE
Polymerises developing heat on contact with: amines,strong bases.
Reacts with hot water and alcohols, decomposing and releasing carbon dioxide.

10.2. Chemical stability

Information not available

10.3. Possibility of hazardous reactions

The product may react violently with water.

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.
XILENE (MISCELA DI ISOMERI)
May react violently with: sulphuric acid,nitric acid,perchloric acid.
May form 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.
2-METHOXY-1-METHYLETHYL ACETATE
May react violently with: oxidising substances,strong acids,alkaline metals.
ETHYLBENZENE
Reacts violently with: strong oxidants.Attacks various types of plastic materials.May form explosive mixtures with: air.
TOLUENE-2,4-DI-ISOCYANATE

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

Polymerises developing heat on contact with: amines,strong bases.Reacts violently developing heat on contact with: acetyl chloride,amines,bases,ethanol,methanol,oxidising substances,phenoles.Forms explosive mixtures with: hot air.

10.4. Conditions to avoid

Avoid overheating. Prevent moisture or water from penetrating inside the containers.

N-BUTYL ACETATE
Avoid exposure to: moisture,sources of heat,naked flames.
ETHYL ACETATE
Avoid exposure to: light,sources of heat,naked flames.
TOLUENE-2,4-DI-ISOCYANATE
Avoid exposure to: sources of heat,naked flames.

10.5. Incompatible materials

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.
2-METHOXY-1-METHYLETHYL ACETATE
Incompatible with: oxidising substances,strong acids,alkaline metals.
TOLUENE-2,4-DI-ISOCYANATE
Incompatible with: water,acids,alkalis,amines,strong oxidants.

10.6. Hazardous decomposition products

ETHYLBENZENE
May develop: methane,styrene,hydrogen,ethane.
TOLUENE-2,4-DI-ISOCYANATE
May develop: carbon oxides,hydrogen cyanide,nitrous gases.

SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.
It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1. Information on toxicological effects

XILENE (MISCELA DI ISOMERI)
XYLENE: toxic action on the central nervous system (encephalopathies); irritating action on skin, conjunctiva, cornea and respiratory system.

Metabolism, toxicokinetics, mechanism of action and other information

2-METHOXY-1-METHYLETHYL ACETATE
The main route of entry is the skin, whereas the respiratory route is less important due to the low vapour pressure of the product.

Information on likely routes of exposure

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

2-METHOXY-1-METHYLETHYL ACETATE
WORKERS: inhalation; contact with the skin.

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

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

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.

2-METHOXY-1-METHYLETHYL ACETATE
Above 100 ppm causes irritation of the eye, nose and oropharynx mucous membranes. At 1000 ppm, disturbance of equilibrium and severe eye irritation can be noticed. Clinical and biological examinations carried out on exposed volunteers revealed no anomalies. Acetate produces greater skin and eye irritation with direct contact. No chronic effects on humans have been reported (INCR, 2010).

SECTION 11. Toxicological information ... / >>

ETHYLBENZENE
As the counterparts of benzene, may have an acute effect on the central nervous system, with depression, narcosis, often preceded by dizziness and associated with headache (Ispesl). Is irritating for skin, conjunctiva and respiratory tract.

Interactive effects

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

LC50 (Inhalation - mists / powders) of the mixture:	> 5 mg/l
LC50 (Inhalation - vapours) of the mixture:	> 20 mg/l
LD50 (Oral) of the mixture:	Not classified (no significant component)
LD50 (Dermal) of the mixture:	>2000 mg/kg

XILENE (MISCELA DI ISOMERI)

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

2-METHOXY-1-METHYLETHYL ACETATE

LD50 (Oral)	8530 mg/kg Rat
LD50 (Dermal)	> 5000 mg/kg Rat

ETHYLBENZENE

LD50 (Oral)	3500 mg/kg Rat
LD50 (Dermal)	15354 mg/kg Rabbit
LC50 (Inhalation)	17,2 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
May produce an allergic reaction.
Contains:
TOLUENE-2,4-DI-ISOCYANATE
TOSYL ISOCYANATE

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

ETHYLBENZENE
Classified in Group 2B (possible human carcinogen) by the International Agency for Research on Cancer (IARC) - (IARC, 2000).
Classified in Group D (not classifiable as a human carcinogen) by the US Environmental Protection Agency (EPA) - (US EPA file

SECTION 11. Toxicological information ... / >>

on-line 2014).

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

May cause respiratory irritation
May cause drowsiness or dizziness

STOT - REPEATED EXPOSURE

May cause damage to organs

ASPIRATION HAZARD

Toxic for aspiration

SECTION 12. Ecological information

No specific data are available for this product. Handle it according to good working practices. Avoid littering. Do not contaminate soil and waterways. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation. Please take all the proper measures to reduce harmful effects on aquifers.

12.1. Toxicity

Information not available

12.2. Persistence and degradability

ALIPHATIC POLYISOCYANATE
Solubility in water 0,1 - 100 mg/l
Degradability: information not available

2-METHOXY-1-METHYLETHYL ACETATE
Solubility in water > 10000 mg/l
Rapidly degradable

ETHYLBENZENE
Solubility in water 1000 - 10000 mg/l
Rapidly degradable

ETHYL ACETATE
Solubility in water > 10000 mg/l
Rapidly degradable

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

TOSYL ISOCYANATE
Solubility in water 1000 - 10000 mg/l
Rapidly degradable

12.3. Bioaccumulative potential

ALIPHATIC POLYISOCYANATE
Partition coefficient: n-octanol/water 5,54
BCF 367,7

2-METHOXY-1-METHYLETHYL ACETATE
Partition coefficient: n-octanol/water 1,2

SECTION 12. Ecological information ... / >>

ETHYLBENZENE
Partition coefficient: n-octanol/water 3,6

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

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

TOSYL ISOCYANATE
Partition coefficient: n-octanol/water 0,6

12.4. Mobility in soil

ALIPHATIC POLYISOCYANATE
Partition coefficient: soil/water 7,3

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 greater 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

14.2. UN proper shipping name

ADR / RID: PAINT
IMDG: PAINT
IATA: PAINT

SECTION 14. Transport information ... / >>

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: II

14.5. Environmental hazards

ADR / RID:	NO
IMDG:	NO
IATA:	NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 33 Special Provision: 640D	Limited Quantities: 5 L	Tunnel restriction code: (D/E)
IMDG:	EMS: F-E, S-E	Limited Quantities: 5 L	
IATA:	Cargo: Pass.: Special Instructions:	Maximum quantity: 60 L Maximum quantity: 5 L A3, A72, A192	Packaging instructions: 364 Packaging instructions: 353

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

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

SECTION 15. Regulatory information ... / >>

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
Carc. 2	Carcinogenicity, category 2
Acute Tox. 2	Acute toxicity, category 2
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
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 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H351	Suspected of causing cancer.
H330	Fatal if inhaled.
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.
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.
H412	Harmful to aquatic life with long lasting effects.
EUH014	Reacts violently with water.
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH204	Contains isocyanates. 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

SECTION 16. Other information ... / >>

- WGK: Water hazard classes (German).

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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.

Changes to previous review:
The following sections were modified:
02 / 03 / 08 / 09 / 11 / 15.
Changed TLVs in section 8.1 for following countries:
CZE,