Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 14.05.2020 Version number 5 Revision: 06.04.2020

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

· **1.1 Product identifier**

· **Trade name: illbruck PU230**

· **MSDS code:** A-I-PU230

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.

· **Application of the substance / the mixture** Glue/ Sising agent

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**
Tremco CPG Netherlands B.V.
tremco illbruck Productie B.V.
Vlietskade 1032, 4241 WC Arkel
T: +31 (0) 183568000, F: +31 (0) 183568100
msds@tremco-illbruck.com

· **Further information obtainable from:**
Tremco CPG UK Ltd
tremco illbruck Ltd
Coupland Road, Hindley Green, Wigan, WN2 4HT
T: +44 (0) 1942251400, F: +44 (0) 1942251410
www.tremco-illbruck.co.uk, uk.info@tremco-illbruck.com

· **1.4 Emergency telephone number:**
During office hours tel.: +44 (0) 1942251400. At all other times it is recommended to call NHS 111 (England/Wales/Scotland), your local GP/pharmacist (NI), 01 809 2166 (ROI), or otherwise to contact a doctor.

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SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**

Acute Tox. 4	H332	Harmful if inhaled.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2	H319	Causes serious eye irritation.
Resp. Sens. 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens. 1	H317	May cause an allergic skin reaction.
Carc. 2	H351	Suspected of causing cancer.
STOT SE 3	H335	May cause respiratory irritation.
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure.
Aquatic Chronic 3	H412	Harmful to aquatic life with long lasting effects.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.

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· **Hazard pictograms**

GHS07 GHS08

· **Signal word** Danger

· **Contains:**
methylenediphenyl diisocyanate

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

· **Precautionary statements**
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P284 In case of inadequate ventilation wear respiratory protection.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

· **Supplemental information:**
EUH204 Contains isocyanates. May produce an allergic reaction.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

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SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

· **Description:** Mixture of substances listed below with non-hazardous additions.

· **Dangerous components:**		
CAS: 26447-40-5 EINECS: 247-714-0 Reg.nr.: 01-2119457015-45-xxxx	methylenediphenyl diisocyanate Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	30-<50%
CAS: 28553-12-0 EINECS: 249-079-5 Reg.nr.: 01-2119430798-28-xxxx	di-"isononyl" phthalate substance with a Community workplace exposure limit	10-<20%

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CAS: 9082-00-2	Ethoxylated/propoxylated glycerol Acute Tox. 4, H302	1-<5%
CAS: 25791-96-2 NLP: 500-044-5	Glycerol, propoxylated Acute Tox. 4, H302	1-<5%
CAS: 6425-39-4 EINECS: 229-194-7 Reg.nr.: 01-2119969278-20-xxxx	2,2'-dimorpholinodiethylether Eye Irrit. 2, H319	1-<5%
CAS: 68479-98-1 EINECS: 270-877-4	diethylmethylbenzenediamine STOT RE 2, H373; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Acute Tox. 4, H312; Eye Irrit. 2, H319	0.1-<1%

· **SVHC** -
· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Take affected persons out of danger area and lay down.
· **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:** If symptoms persist consult doctor.
· **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
· **Information for doctor:** No further relevant information available.
· **Hazards** No further relevant information available.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
Carbon monoxide (CO)

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Carbon dioxide (CO_2)
Nitrogen oxides (NOx)
Under certain fire conditions, traces of other toxic gases cannot be excluded, e.g.:
Hydrogen cyanide (HCN)

· **5.3 Advice for firefighters**
· **Protective equipment:** Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Remove persons from danger area.
· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of contaminated material as waste according to Section 13.
Ensure adequate ventilation.
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· **Information about fire - and explosion protection:** No special measures required.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** Keep container tightly sealed.
· **7.3 Specific end use(s)** No further relevant information available.

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SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
CAS: 28553-12-0 di-"isononyl" phthalate	
WEL	Long-term value: 5 mg/m³

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· **DNELs**

· **Long term effects**		
CAS: 26447-40-5 methylenediphenyl diisocyanate		
Inhalative	industrial	0.05 mg/m3 (workers) (systemic and local effects)
	consumer	0.025 mg/m3 (general public) (systemic and local effects)
CAS: 6425-39-4 2,2'-dimorpholinodiethylether		
Oral	consumer	0.5 mg/kg/24h (general public) (systemic effects)
Dermal	industrial	1 mg/kg/24h (workers) (systemic effects)
	consumer	0.5 mg/kg/24h (general public) (systemic effects)
Inhalative	industrial	7.28 mg/m3 (workers) (systemic effects)
	consumer	1.8 mg/m3 (general public) (systemic effects)

· **Short term effects**		
CAS: 26447-40-5 methylenediphenyl diisocyanate		
Oral	consumer	20 mg/kg (general public) (systemic effects)
Dermal	industrial	50 mg/kg (workers) (systemic effects)
	industrial	28.7 mg/cm2 (workers) (local effects)
	consumer	25 mg/kg (general public) (systemic effects)
Inhalative	industrial	0.1 mg/m3 (workers) (systemic and local effects)
	consumer	0.05 mg/m3 (general public) (systemic and local effects)

· **PNECs**	
CAS: 26447-40-5 methylenediphenyl diisocyanate	
PNEC	1 mg/L (fresh water)
	1 mg/L (sewage treatment plant)
	1 mg/L (soil)
	10 mg/L (sporadic release)
	0.1 mg/L (salt water)
PNEC	mg/kg dwt (sediment (salt water)) (exposure not expected)
	mg/kg dwt (sediment (fresh water)) (exposure not expected)
CAS: 6425-39-4 2,2'-dimorpholinodiethylether	
PNEC	0.1 mg/L (fresh water) (assessment factors)
	100 mg/L (sewage treatment plant) (assessment factors)
	1 mg/L (intermittent release) (assessment factors)
	0.01 mg/L (marine) (assessment factors)
PNEC	1.58 mg/kg (soil) (equilibrium partitioning)
	0.82 mg/kg (sediment (salt water)) (equilibrium partitioning)
	8.2 mg/kg (sediment (fresh water)) (equilibrium partitioning)
	10 mg/kg (secondary poisoning) (assessment factors)

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· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.
· **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
For further guidance,
please refer to HSE HSG53 "Respiratory Protective Equipment at work - A Practical Guide".
· **Protection of hands:**

Protective gloves

· **Material of gloves**
Butyl rubber, BR
Recommended thickness of the material: ≥ 0.7 mm
Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.4 mm
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
For the mixture of chemicals mentioned below the penetration time has to be at least 480 minutes (Permeation according to EN 16523-1:2015: Level 6).
· **Eye protection:**

Tightly sealed goggles

· **Body protection:**

Protective work clothing

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SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Colour:	According to product specification
· **Odour:**	Characteristic
· **Odour threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Melting point/freezing point:**	Undetermined.
· **Initial boiling point and boiling range:**	>325 °C
· **Flash point:**	190 °C
· **Flammability (solid, gas):**	Not applicable.
· **Ignition temperature:**	400 °C
· **Decomposition temperature:**	Not determined.
· **Auto-ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	0.1 Vol %
Upper:	0.2 Vol %
· **Vapour pressure:**	Not determined.
· **Density at 20 °C:**	1.07 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with water:**	Immiscible / difficult to mix.
· **Partition coefficient: n-octanol/water:**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
VOC (EU)	0.0 g/l
VOC (EC)	0.00 %
· **9.2 Other information**	No further relevant information available.

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SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** No dangerous reactions known.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

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SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity**
Harmful if inhaled.

· **LD/LC50 values relevant for classification:**		
CAS: 26447-40-5 methylenediphenyl diisocyanate		
Oral	LD50	>2,000 mg/kg (rat)
Dermal	LD50	>9,400 mg/kg (rabbit)
Inhalative	LC50/1 h	1.5 mg/L (rat)
CAS: 9082-00-2 Ethoxylated/propoxylated glycerol		
Oral	LD50	>500 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
CAS: 25791-96-2 Glycerol, propoxylated		
Oral	LD50	1,999 mg/kg (rat)
CAS: 6425-39-4 2,2'-dimorpholinodiethylether		
Oral	LD50	2,025 mg/kg (rat)
Dermal	LD50	3,038 mg/kg (rabbit)
CAS: 68479-98-1 diethylmethylbenzenediamine		
Oral	LD50	738 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)

· **Primary irritant effect:**
· **Skin corrosion/irritation**
Causes skin irritation.
· **Serious eye damage/irritation**
Causes serious eye irritation.
· **Respiratory or skin sensitisation**
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

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· **Carcinogenicity**
Suspected of causing cancer.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure**
May cause respiratory irritation.
· **STOT-repeated exposure**
May cause damage to organs through prolonged or repeated exposure.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

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SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**	
CAS: 26447-40-5 methylenediphenyl diisocyanate	
LC50/96 h (static)	>1,000 mg/L (brachydanio rerio) (OESO 203)
EC50/24 h (static)	>1,000 mg/L (daphnia magna) (OESO 202)
EC50/72 h (static)	>1,640 mg/L (scenedesmus subspicatus) (OESO 201)
CAS: 9082-00-2 Ethoxylated/propoxylated glycerol	
LC50/48 h	>100 mg/L (brachydanio rerio)
EC50/48 h	>100 mg/L (daphnia magna)
EC50/72 h	>1,000 mg/L (scenedesmus capricornutum)
CAS: 6425-39-4 2,2'-dimorpholinodiethylether	
LC50/96 h	2,150 mg/L (fish) (OECD 203)
EC50/48 h	>100 mg/L (daphnia magna) (OECD 202)

· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.

· **Ecotoxical effects:**	
CAS: 26447-40-5 methylenediphenyl diisocyanate	
LC50/14 d	>1,000 mg/kg (eisenia foetida) (OESO 207)
NOEC/21 d	>10 mg/L (daphnia magna) (OESO 202)
NOEC/14 d	>1,000 mg/kg (avea sativa) (OESO 208)
	>1,000 mg/kg (lactuca sativa) (OESO 208)

· **Additional ecological information:**
· **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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· **12.6 Other adverse effects** No further relevant information available.

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SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**	
HP4	Irritant - skin irritation and eye damage
HP5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP7	Carcinogenic
HP13	Sensitising
HP14	Ecotoxic

· **Uncleaned packaging:**
· **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· **14.1 UN-Number** · **ADR, ADN, IMDG, IATA**	Void
· **14.2 UN proper shipping name** · **ADR, ADN, IMDG, IATA**	Void
· **14.3 Transport hazard class(es)** · **ADR, ADN, IMDG, IATA** · **Class**	Void
· **14.4 Packing group** · **ADR, IMDG, IATA**	Void
· **14.5 Environmental hazards:** · **Marine pollutant:**	No
· **14.6 Special precautions for user**	Not applicable.
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **UN "Model Regulation":**	Void

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SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
"CLP" Regulation (EC) No 1272/2008 (OJ L 353, 31.12.2008, p.1).
"REACH" Regulation (EC) No 1907/2006 (OJ L 396, 30.12.2006, p.1, with subsequent amendments).

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COMMISSION REGULATION (EU) 2015/830 of 28 May 2015.
HSE EH40/2005 Workplace Exposure Limits (as amended)
Guidance on the classification and assessment of waste | Technical Guidance WM3 (1st edition 2015)
2001/118/EC as regards the list of wastes
2008/98/EC on waste

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 52a, 56

· **National regulations:**

· **Information about limitation of use:**
Employment restrictions concerning juveniles must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.

· **Other regulations, limitations and prohibitive regulations**
· **Substances of very high concern (SVHC) according to REACH, Article 57** Not applicable.
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**
H302 Harmful if swallowed.
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.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

· **Department issuing SDS:**
Prepared and verified in accordance with "REACH" Regulation (EC) No 1907/2006, Annex II, Part A, 0.2.3.

· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

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PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 4: Acute toxicity - inhalation – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3
· *** Data compared to the previous version altered.**