PU 3045 Cast floor, Component B

Safety Data Sheet

pursuant to Regulation (EC) No 453/2010

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

	1.1	Product identification Product form: Mixture Product code : Dutch Resin PU 3045 Cast Floor, Component B Product group: Cast floors	
	1,2	Relevant identified use Main usage category Industrial/Professional use spec. Use of the substance or mixture; Forms of use that are advised against	Industrial use For professional use only Flooring No additional information available
	1.3	Dutch Resin Group Gladsaxe 19 7327 JZ Apeldoorn T +31 (0)55 312 44 65 info@dutchresin.nl	Visiting address Gladsaxe 19 Apeldoorn
	1.4	Emergency number: T +31 (0)557850749 This number is only available during office hours.	

		Land	Official advisory body	Emergency number address	
		NETHERLANDS	National Poisons Information Center. University Medical Center Utrecht, The National Poisons Information Center (NVIC) informs doctors, veterinarians, pharmacists, and other healthcare professionals about the possible health effects and treatment options for poisonings. The NVIC is available for this purpose day and night, both by telephone and via the internet.	Mailbox s 85500 3508 GA Utrecht	+31 30 274 88 88

SECTION 2: Identification of hazards

	2.1	Classification of the substance or mixture
		Acute toxicity, Inhalation, Category 4 (H332) Skin sensitization, Category 1 (H317) Specific target organ toxicity (single exposure), Category 3 (H335) GHS07
	2.2	Labeling elements
		Symbols:  Signal word (CLP): warning Hazard statements (CLP): H317 - May cause an allergic skin reaction. H332 - Harmful if inhaled. H335 - May cause respiratory irritation. Safety Recommendations (CLP):

		P261 - Avoid inhalation of vapor, smoke, gas, spray, mist. P280 Wear protective gloves. P304 + P340 + P312 IF INHALATION: Move the person to fresh air and ensure they can breathe easily. If you feel unwell, consult a POISON CENTER/doctor. P333 + P313 If skin irritation or rash occurs: consult a doctor. P362 + P364 Remove contaminated clothing and wash before reuse. P403 + P233 Store in a well-ventilated place. Store in a tightly closed container. Additional risk characteristics and labelling elements: EUH204 Contains isocyanates. May cause an allergic reaction.			
	2.3	Other dangers			
		No data available			
SECTION 3: Composition and information on ingredients					
	3.2	Mixture of hazardous and non-hazardous substances			
		Hydrophilic, aliphatic polyisocyanate			
		name	product identification	%	Classification in accordance with Regulation (EC) No 1272/2008 [CLP] with Regulation (EU) 2016/1179
		Hexamethylene-1,6-diisocyanate homopolymer	EC No.: 500-060-2 REACH registration number: 01-2119488934-20-0000 CAS No.: 28182-81-2	60-80	Acute Tox. 4 Inhalative H332 Skin Sens. 1 H317 STOT SE 3 H335
		Hydrophilic aliphatic polyisocyanate based on HDI	CAS No.: 666723-27-9	10-30	Acute Tox. 3 Inhalative H331 Skin Sens. 1 H317 STOT SE 3 H335 Aquatic Chronic 3 H412
		Hexamethylenediisocyanate, oligomerization product (type uretdione)	EC No.: 500-060-2 REACH registration number: 01-2119488177-26-0000 CAS No.: 28182-81-2	10-20	Acute Tox. 3 Inhalative H331 Skin Sens. 1 H317 STOT SE 3 H335
		hexamethylene-1,6-diisocyanate	index no.: 615-011-00-1 REACH registration number: 01-2119457571-37-0000, 01-2119457571-37-0005, 01-2119457571-37-0006 CAS No.: 822-06-0	<0.5	Acute Tox. 4 Oral H302 Acute Tox. 1 Inhalative H330 Skin Irrit. 2 H315 Eye Irrit. 2 H319 Resp. Sens. 1 H334 Skin Sens. 1 H317 STOT SE 3 H335 Resp. Sens. 1 H334 >= 0.5 % Skin Sens. 1 H317 >= 0.5 %
		Since the polymer or polymers including impurities are exempt from			

		In connection with the registration requirement under Article 2(9) of the REACH Directive (EC) No 1907/2006, no exposure scenarios are available. The necessary information on operational conditions and risk management measures are described in Chapter 8 of this SDS.
		Candidate list of substances - very careful for authorisation This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57)

SECTION 4: First aid measures

	4.1	Description of the first aid measures
		General First Aid: Never administer anything by mouth to an unconscious person. If you feel unwell, consult a doctor (show them this label if possible). In case of contact with skin: Remove contaminated clothing immediately. CONSULT A DOCTOR IMMEDIATELY. Immediately remove the contaminated clothing items and dispose of them safely. In case of contact with the skin, wash immediately with plenty of water and soap. In case of contact with the eyes: In case of contact with the eyes, rinse thoroughly with water for a sufficient time, keeping the eyelids apart, and then consult an ophthalmologist immediately. Protect the uninjured eye. In case of ingestion: DO NOT induce vomiting. Do not give anything to eat or drink. In case of inhalation: In case of irregular or absent breathing, apply artificial respiration. In case of inhalation, consult a doctor immediately and show the packaging or label.
	4.2	Main acute and delayed symptoms and effects
		Notes for the doctor: First aid, disinfection, symptomatic treatment.
	4.3	Indication of the required immediate medical care and special treatment
		No data available

SECTION 5: Firefighting measures

	5.1	Extinguishing equipment
		Suitable extinguishing agents: Foam. AFFF. Water mist. Unsuitable extinguishing agents: strong water jet
	5.2	Special hazards caused by the substance or mixture
		During a fire, carbon monoxide, carbon dioxide, nitrogen oxide, isocyanate vapors, and traces of hydrogen cyanide (prussic acid) are produced. Avoid inhaling smoke during fire and/or explosion.
	5.3	Advice for firefighters
		Fire precautions: No open flames, no sparks, and no smoking. Firefighting instructions: Do not enter the fire zone without suitable safety equipment, including respiratory protection. Protection during firefighting: Cool the exposed vessels with a water spray or mist. Additional information: Exercise extreme caution when fighting a chemical fire. Collect the contaminated extinguishing water used for the fire separately. Do not discharge into the sewer. Move the undamaged containers out of the danger zone, if this can be done safely.

SECTION 6: Measures in the event of accidental release of the substance or mixture

	6.1	Personal precautions, protective equipment and emergency procedures
		Wear personal protective equipment. Wear respiratory equipment when exposed to vapors/ dust/aerosols. Ensure good ventilation. Use suitable respiratory protective equipment. Consult the protective measures as set out in points 7 and 8.
	6.11 For	persons other than emergency services
		Protective equipment: Equip cleaning staff with appropriate protection. Emergency procedures: Keep spectators at a distance.
	6.12 For	the emergency services
		additional information available
	6.2	Environmental precautions
		Prevent penetration into the soil/subsoil. Prevent runoff into surface water or the sewer. Store the contaminated rinse water and dispose of it. In the event of a gas leak or infiltration into watercourses, soil, or sewers, notify the responsible authorities. Suitable material for collection: absorbent material, organic matter, sand.
	6.3	Methods and material for containment and cleaning up
	6.3	For containment: Use suitable waste containers. Cleaning methods: Clean up spilled product as soon as possible using an absorbent product. Rinse with plenty of water
	6.4	Reference to other sections
		Regarding waste disposal after cleaning, see section 13. See section 8 regarding the use of personal protective equipment.
SECTION 7: Handling and storage		
	7.1	Precautions for the safe handling of the substance or mixture
		Avoid contact with skin and eyes, inhalation of vapors and mist. Use the local ventilation system. Do not use empty containers before they have been cleaned. Before proceeding with the move, check that there are no residues of incompatible material present in the containers. Remove contaminated clothing and protective equipment before entering areas where eating takes place. Do not eat or drink during work. Reference is also made to paragraph 8 for the recommended protective equipment.
	7.2	Conditions for safe storage, including incompatible products
		Keep away from food, drink, and feed. Incompatible substances: None in particular. See also paragraph 10 below. Instructions for the rooms. Well-ventilated rooms.
	7.3	Specific end-use
		B Component coating
SECTION 8: Exposure control measures/personal protection		
	8.1	Control parameters
		No data regarding air limit values required under EC Directive 2006/121/EC

	8.2	Measures to control exposure
		Respiratory protection Nose and mouth protection is required in case of insufficient ventilation at the workplace and during injection molding. A fresh-air mask or, for short-term work, a combination filter A2-P2 is recommended. Further recommendations regarding respiratory protection can be found in the individual exposure scenarios in the appendix. Handling of this product is not recommended in case of hypersensitivity of the respiratory tract and skin (asthma, chronic bronchitis, chronic skin diseases). Hand protection Suitable material for safety gloves; EN 374: Butyl rubber - IIR: thickness >=0.5 mm; Breakthrough time >=480 min. Fluororubber - FKM: thickness >=0.4 mm; Breakthrough time >=480 min. Layered glove - PE/EVAL/PE; Breakthrough time >=480 min. Advice: dispose of contaminated gloves. Eye protection Wear eye/face protection. Skin and body protection Wear suitable protective clothing.

SECTION 9: Physical and chemical properties

	9.1	Information about basic physical and chemical properties
		Appearance: liquid Color: yellowish Odor: almost odorless Odor threshold: not established pH: not established Delta point: approx. -45 °C ISO 3016 Boiling point/ boiling range: n/a, decomposition DIN 53171 Flash point: approx. 185 °C DIN EN 22719 Evaporation rate: not established Flammability (solid, gas): Not applicable Final number: Not applicable Vapor pressure: approx. 5 hPa at 20 °C EC A4 approx. 9 hPa at 50 °C EC A4 approx. 10 hPa at 55 °C EC A4 Vapor pressure of constituents: hexamethylene-1,6-diisocyanate approx. 0.007 hPa at 20 °C Hexamethylene-1,6-diisocyanate homopolymer < 0.00001 hPa at 20 °C (vapor pressure balance/OECD No. 104) Hexamethylene diisocyanate, oligomerization product (uretdione type) approx. 0.0029 hPa at 20 °C Vapor tightness: not established Density: approx. 1.15 g/ cm³ at 20 °C DIN 51757 Mixability with water: immiscible at 15 °C Surface tension: not established Partition coefficient (nÿoctanol/water): not established Autoignition temperature: Not applicable Ignition temperature: approx. 445 °C DIN 51794 Decomposition temperature: approx. 181 °C Viscosity, dynamic: not established DIN EN ISO 3219/A.3 Explosive properties: not established

		Dust explosion class: Not applicable Oxidizing properties: not determined
	9.2	Other information
		no.
SECTION 10: Stability and reactivity		
	10.1	Reactivity
		This information is not available
	10.2 Chemical stability	
		This information is not available
	10.3 Possible dangerous reactions	
		Exothermic reaction with amines and alcohols; gradual CO2 evolution with water, pressure increase in sealed containers; risk of bursting.
	10.4 Conditions to be avoided	
		Extremely high or low temperatures. Protect from direct sunlight.
	10.5 Chemically interacting materials	
		This information is not available
	10.6 Dangerous decomposition products smoke.	
		No hazardous decomposition products with professional storage and handling.
SECTION 11: Toxicological information		
	11.1	Information about toxicological effects
		Acute toxicity, oral Hexamethylene-1,6-diisocyanate homopolymer LD50 Rat, female: >= 5,000 mg/kg Method: OECD test guideline 423 Hydrophilic aliphatic polyisocyanate based on HDI LD50 Rat: >= 5,000 mg/kg Method: OECD test guideline 423 Toxicological studies on a comparable product. Acute toxicity, dermal Hexamethylene-1,6-diisocyanate homopolymer LD50 Rat, male/female: > 2,000 mg/kg Method: OECD 402 Test Guideline for a comparable product. LD50 Rabbit, male/female: > 2,000 mg/kg Studies of a comparable product. Hydrophilic aliphatic polyisocyanate based on HDI LD50 Rat, male/female: > 2,000 mg/kg Method: OECD 402 Test Guideline. Studies of a comparable product. Acute toxicity, inhalatory ATEmix (inhalation): 1.07 mg/l, 4 h Test atmosphere: dust/mist Method: Calculation method Hexamethylene-1,6-diisocyanate homopolymer LC50 Rat, female: 0.390 mg/l, 4 h Test atmosphere: dust/mist

		Method: OECD Guideline 403 Toxicological studies on a comparable product. The test atmosphere established in the animal test is not representative of working environments, how the substance is marketed, and how it can reasonably be expected to be used. The test result can therefore not be applied directly to assess hazard. Based on expert assessment and evaluation of the evidence, a modified classification for acute inhalation toxicity is justified. Converted acute toxicity estimate 1.5 mg/l Test atmosphere: dust/mist Method: Expert judgment Acute toxicity, oral Hexamethylene-1,6-diisocyanate homopolymer LD50 Rat, female: >= 5,000 mg/kg Method: OECD test guideline 423 Hydrophilic aliphatic polyisocyanate based on HDI LD50 Rat: >= 5,000 mg/kg Method: OECD test guideline 423 Toxicological studies on a comparable product. Acute toxicity, dermal Hexamethylene-1,6-diisocyanate homopolymer LD50 Rat, male/female: > 2,000 mg/kg Method: OECD 402 test guideline. Studies of a comparable product. LD50 Rabbit, male/female: > 2,000 mg/kg Studies of a comparable product. Hydrophilic aliphatic polyisocyanate based on HDI LD50 Rat, male/female: > 2,000 mg/kg Method: OECD 402 test guideline. Studies of a comparable product. Acute toxicity, inhalatory ATEmix (inhalation): 1.07 mg/l, 4 h Test atmosphere: dust/mist Method: Calculation method Hexamethylene-1,6-diisocyanate homopolymer LC50 Rat, female: 0.390 mg/l, 4 h Test atmosphere: dust/mist Method: OECD 403 Test guideline Toxicological studies on a comparable product. The test atmosphere established in the animal test is not representative of working environments, how the substance is marketed, and how it can reasonably be expected to be used. The test result therefore cannot be applied directly to assess hazard. Based on expert assessment and evaluation of the evidence, a modified classification for acute inhalation toxicity is justified. Converted acute toxicity estimate 1.5 mg/l Test atmosphere: dust/mist Method:
		Expert opinion Rating: Harmful if inhaled

SECTION 12: Ecological information

		Do not allow to penetrate surface water, wastewater, or soil. Below is the information available to us:
	12.1	toxicity
		Acute toxicity to fish Hexamethylene-1,6-diisocyanate homopolymer LC50 > 100 mg/l Species: Danio rerio (zebrafish) Exposure duration: 96 h Method: Directive 67/548/EEC, Annex V, C.1. Sample preparation based on the reactivity of the substance with water: Ultra Turrax: 60 sec. 8000 rpm; 24h magnetic stirrer; filtration. Hydrophilic aliphatic polyisocyanate based on HDI LC50 35.2 mg/l Species: Danio rerio (zebrafish)

		Exposure duration: 96 h Method: OECD 203 Guideline test Ecotoxicological studies on a comparable product Acute daphnia toxicity Hexamethylene-1,6-diisocyanate homopolymer EC50 > 100 mg/l Species: Daphnia magna (large water flea) Exposure duration: 48 h Method: Directive 67/548/EEC, Annex V, C.2. Sample preparation based on the reactivity of the substance with water: Ultra Turrax: 60 sec. 8000 rpm; 24h magnetic stirrer; filtration. Hydrophilic aliphatic polyisocyanate based on HDI EC50 > 100 mg/l Species: Daphnia magna (large water flea) Exposure duration: 48 h Method: OECD test guideline 202 Ecotoxicological studies on a comparable product Acute algal toxicity Hexamethylene-1,6-diisocyanate homopolymer ErC50 199 mg/l T Species type: Growth inhibitor Species: scenedesmus subspicatus. Exposure duration: 72 h Method: Directive 67/548/EEC, Annex V, C.3. Sample preparation based on the reactivity of the substance with water: Ultra Turrax: 60 sec. 8000 rpm; 24h magnetic stirrer; filtration. Hydrophilic aliphatic polyisocyanate based on HDI ErC50 72 mg/l Species: Desmodesmus subspicatus (green algae). Exposure duration: 72 h Method: OECD test guideline 201 Ecotoxicological studies of a comparable product Acute bacterial toxicity Hexamethylene-1,6-diisocyanate homopolymer EC50 > 10,000 mg/l Test type: Respiratory inhibition Species: activated sludge. Exposure duration: 3 h Method: EC Directive 88/302/EEC Hydrophilic aliphatic polyisocyanate based on HDI EC50 > 10,000 mg/l Type: activated sludge. Method: OECD test guideline 209 Ecotoxicological studies on a comparable product Ecotoxicology Assessment Hexamethylene-1,6-diisocyanate homopolymer Acute aquatic toxicity: Based on available data; classification criteria have not been met. Chronic aquatic toxicity: Based on available data; the classification criteria have not been met. Impact on Wastewater Treatment: In biological treatment plants, there is no risk of impairment of purification capacity due to low bacterial toxicity.
	12.2 Persistence and degradability	
		The substance must be classified as non-volatile in water. Investigations of hydrolysis products.

	12.3 Bioaccumulation:	
		The substance hydrolyzes rapidly in water. An increase in aquatic organisms is not to be expected.
	12.4 Mobility in the soil	
		No information is available
	12.5 Results of PBT and zPzB assessment	
		(9016-87-9) This substance/mixture does not meet the PBT criteria of the REACH Regulation, Annex XIII. This substance/mixture does not meet the vPvB criteria of REACH Regulation, Annex XIII
	12.6 Other harmful effects	
		Isocyanate reacts with water at the interface, forming CO2 and a solid, insoluble product with a high melting point (polyurea). This reaction is strongly promoted by surfactants (e.g., liquid soap) or water-soluble substances. Based on current experience, polyurea is inert and non-biodegradable.
SECTION 13 Disposal instructions		
	13.1 Waste processing methods	
		Recommendations for the disposal of products/packaging: Dispose of safely in accordance with local/national regulations. Clean up safely in accordance with local/national regulations. Additional information: Empty packaging will be recycled, reused, or disposed of in accordance with local regulations. Ecology - waste: Prevent discharge into the environment. EURAL code: 08 05 01* - isocyanate waste
SECTION 14: Information regarding transport		
		Land transport (ADR / RID / GGVSEB
	14.1 UN number	
		Not regulated
	14.2 Proper shipping name in accordance with the UN Model Regulations:	
		Not regulated
	14.3 Transport hazard class(es):	
		Not regulated
	14.4 Packaging group:	
		Not regulated
	14.5 Environmental hazards:	
		Not regulated
	14.6 Special precautions for the user:	

		Not hazardous transport goods. Protect from moisture. Heat sensitive from +50 °C. Keep separate from food and beverages.
	14.7 Transport in bulk in accordance with Annex II to MARPOL 73/78 and the IBC Code	
		Not applicable
SECTION 15: Regulations		
	15.1	Specific safety, health and environmental regulations and legislation for the substance or mixture
		Directive 2012/18/EU on the control of major accident hazards involving dangerous substances. Not applicable. Water pollution class (Germany) 1 mildly water-polluting (according to Annex 4 of the VWS). All existing national regulations for the handling of isocyanates must be observed.
		Other regulations of the European Commission for the Association of Paint and Printing Ink Manufacturers - CEPE - the following information is provided for dyes containing isocyanate: Ready-to-use dyes containing isocyanates can cause irritation of the mucous membranes - in particular irritate the respiratory tract and induce hypersensitivity reactions. There is a risk of sensitization upon inhalation of vapors or spray mist. When handling isocyanate-containing dyes, all measures for solvent-based dyes must be carefully observed. In particular, spray mists and vapors must not be inhaled. Allergic, asthmatic, and persons susceptible to respiratory diseases must not perform work with isocyanate-containing dyes.
	15.2 Chemical safety assessment	
		Chemical safety assessment has been performed for: Hexamethylene-1,6-diisocyanate homopolymer
SECTION 16: Other information		
		Indication of changes: Revision: *. Data sources: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on the classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC and amending Regulation (EC) No 1907/2006.
		Full text of hazard statements (H-phrases) according to sections 2, 3 and 10 H302 Harmful if swallowed. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H330 Fatal if inhaled. H331 Toxic by inhalation. H332 Harmful if inhaled. H334 May cause allergy or asthma symptoms or difficulty breathing if inhaled. H335 May cause respiratory irritation. H412 Harmful to aquatic organisms, with long-lasting effects. The product is primarily used as a hardener in coating materials or adhesives.

		used. Handling of coating materials or adhesives containing reactive polyisocyanates and monomeric HDI residues requires appropriate safety measures (see also this Safety Data Sheet). These products may therefore only be used in industrial or professional applications. They are not suitable for use in DIY applications. Changes made after the publication of the previous edition are marked in the margin. This edition replaces all earlier versions. Further information The information on this Safety Data Sheet is, to the best of our knowledge, accurate on the indicated issue date. This information is intended solely as a guide for safe handling, use, processing, storage, transport, disposal, and release, and should not be considered a guarantee or indication of quality. The information applies only to the product mentioned herein and is not automatically valid when used together with other products or in any other process, unless stated otherwise.
		Other information: # REACH Declaration: All information is based on current knowledge. Consistency of the data in this Safety Data Sheet with the data stated in the Chemical Safety Report has been considered to the extent that these were available at the time of compilation (see Version number and Revision date). DISCLAIMER OF LIABILITY The information in this sheet was obtained from sources that are, to the best of our knowledge, reliable. However, the information was provided without any guarantee—directly implied—regarding its accuracy. The conditions or methods of handling, storage, use, or finishing of the product are beyond our control and influence and may also be beyond our knowledge. For these and other reasons, we accept no liability whatsoever, while liability for losses, damage, or expenses that may arise in any way from the handling, storage, use, or finishing and disposal of the product is expressly disclaimed. Abbreviations and acronyms: RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) ICAO: International Civil Aviation Organization ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association GHS: Globally Harmonized System of Classification and Labeling 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) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Acute Tox. 4: Acute Toxicity – Category 4 Skin Corr. 1B: Skin corrosion/irritation – Category 1B Skin Irrit. 2: Skin corrosion/irritation – Category 2 Eye Dam. 1: Serious eye damage/eye irritation – Category 1 Skin Sens. 1: Skin sensitization – Category 1 Repr. 2: Reproductive toxicity – Category 2 STOT SE 3: Specific target organ toxicity after single exposure – Category 3

		Aquatic Chronic 2: Hazard to the aquatic environment - long-term aquatic hazard – Category 2 Aquatic Chronic 3: Hazard to the aquatic environment – long-term aquatic hazard – Category 3