



SAFETY DATA SHEET VULCABOND MDX

According to Regulation (EC) No 1907/2006, Annex II, as amended.

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

1.1. Product identifier

Product name	VULCABOND MDX
Product number	P97742
UFI	UFI: 9KPQ-N8P5-D00W-KK3U

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

Identified uses	Bonding agent for PVC plastisols.
Uses advised against	Restricted to professional users.

1.3. Details of the supplier of the safety data sheet

Supplier	VALTRIS SPECIALTY CHEMICALS Lankro Way Eccles Manchester M30 0LX Tel. +44 (0) 161 785 1111 24hr Tel. + 44 (0) 161 785 1300 Fax. +44 (0) 161 788 7886 e-mail: RegAffairs@valtris.com
Contact person	L. Hadcroft

1.4. Emergency telephone number

Emergency telephone	CARECHEM 24: +44 1273 289451
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Not Classified
Health hazards	Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Repr. 1B - H360D
Environmental hazards	Not Classified

2.2. Label elements

Hazard pictograms



Signal word	Danger
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Hazard statements	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. H360D May damage the unborn child.
Precautionary statements	P261 Avoid breathing vapour/ spray. P284 [In case of inadequate ventilation] wear respiratory protection. P280 Wear protective clothing, gloves, eye and face protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor. P501 Dispose of contents/ container in accordance with national regulations.
Supplemental label information	EUH204 Contains isocyanates. May produce an allergic reaction.
Contains	Toluene diisocyanate homopolymer, N-METHYL-2-PYRROLIDONE, TOLUENE-DIISOCYANATE
Supplementary precautionary statements	P264 Wash contaminated skin thoroughly after handling. P272 Contaminated work clothing should not be allowed out of the workplace. P302+P352 IF ON SKIN: Wash with plenty of water. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P333+P313 If skin irritation or rash occurs: Get medical advice/ attention. P337+P313 If eye irritation persists: Get medical advice/ attention. P362+P364 Take off contaminated clothing and wash it before reuse.

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Di-isononyl phthalate	70-80%
CAS number: 68515-48-0	EC number: 271-090-9
Substance with a Community workplace exposure limit.	
Classification	
Not Classified	
Toluene diisocyanate homopolymer	10-30%
CAS number: 9017-01-0	
Classification	
Skin Irrit. 2 - H315	
Eye Irrit. 2 - H319	
Skin Sens. 1 - H317	

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N-METHYL-2-PYRROLIDONE	1-2%
CAS number: 872-50-4	EC number: 212-828-1
Classification	
Skin Irrit. 2 - H315	
Eye Irrit. 2 - H319	
Repr. 1B - H360D	
STOT SE 3 - H335	
TOLUENE-DIISOCYANATE	<1%
CAS number: 26471-62-5	EC number: 247-722-4
Classification	
Acute Tox. 1 - H330	
Skin Irrit. 2 - H315	
Eye Irrit. 2 - H319	
Resp. Sens. 1 - H334	
Skin Sens. 1 - H317	
Carc. 2 - H351	
STOT SE 3 - H335	
Aquatic Chronic 3 - H412	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Composition comments n-methyl-2-pyrrolidone (CAS 872-50-4) listed as SVHC (substance of very high concern) - Included in the REACH candidate list - Note REACH obligations, Article 31 EC1907/2006 REACH restriction applies (Entry 71, Annex XVII EC1907/2006).

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move affected person to fresh air at once. Get medical attention immediately. If breathing stops, provide artificial respiration. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Symptoms may develop after several hours.
Ingestion	Do not induce vomiting. Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention immediately.
Skin contact	Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention immediately. Wash contaminated clothing before reuse.
Eye contact	Remove any contact lenses and open eyelids wide apart. Rinse immediately with plenty of water. Get medical attention immediately. Continue to rinse for at least 15 minutes.

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

Inhalation	The product contains a sensitising substance. May cause sensitisation or allergic reactions in sensitive individuals.
Skin contact	May cause sensitisation by skin contact.

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

Notes for the doctor For detailed information on the ingredients see Section 3. Symptomatic treatment is advised.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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Suitable extinguishing media Extinguish with foam, carbon dioxide, dry powder or water fog.

5.2. Special hazards arising from the substance or mixture

Specific hazards Toxic Cyanide compounds. Thermal decomposition or combustion products may include the following substances: Oxides of carbon.

5.3. Advice for firefighters

Protective actions during firefighting Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Follow precautions for safe handling described in this safety data sheet.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Absorb in vermiculite, dry sand or earth and place into containers. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid inhalation of vapours and contact with skin and eyes. Mechanical ventilation or local exhaust ventilation may be required. If ventilation is inadequate, suitable respiratory protection must be worn. Observe any occupational exposure limits for the product or ingredients.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place. Avoid the following conditions: Water, moisture. Isocyanates react slowly with water producing carbon dioxide which can lead to the development of dangerous pressure inside closed containers of the products should they become contaminated with water.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

Usage description Restricted to professional users.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

Di-isononyl phthalate

Long-term exposure limit (8-hour TWA): WEL 5 mg/m³

N-METHYL-2-PYRROLIDONE

Long-term exposure limit (8-hour TWA): WEL 10 ppm 40 mg/m³

Short-term exposure limit (15-minute): WEL 20 ppm 80 mg/m³

Sk

TOLUENE-DIISOCYANATE

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Long-term exposure limit (8-hour TWA): WEL 0.02 mg/m³(Sen)

Short-term exposure limit (15-minute): WEL 0.07 mg/m³(Sen)

WEL = Workplace Exposure Limit.

Sk = Can be absorbed through the skin.

Ingredient comments

Workplace Exposure Limits 2005 - (EH40) The following exposure limit(s) apply for:
Isocyanates (-NCO) : UK EH40 MEL - TWA (8 hours) = 0.02mg/m³ ; STEL (15 minutes) = 0.07mg/m³ ; (Sensitizing).

Di-isononyl phthalate (CAS: 68515-48-0)

DNEL	Workers - Dermal; Long term systemic effects: 366 mg/kg/day Workers - Inhalation; Long term systemic effects: 51.72 mg/m ³ Consumer - Dermal; Long term systemic effects: 220 mg/kg/day Consumer - Inhalation; Long term systemic effects: 15.3 mg/m ³ Consumer - Oral; Long term systemic effects: 4.4 mg/kg/day
PNEC	- Soil; 30 mg/kg

N-METHYL-2-PYRROLIDONE (CAS: 872-50-4)

DNEL	Workers - Dermal; Long term systemic effects: 4.8 mg/kg/day Workers - Inhalation; Long term systemic effects: 14.4 mg/m ³
PNEC	- Fresh water; 0.25 mg/l - marine water; 0.025 mg/l - Intermittent release; 5 mg/l - Sediment (Freshwater); 0.805 mg/kg - Soil; 0.138 mg/kg - STP; 10 mg/l

TOLUENE-DIISOCYANATE (CAS: 26471-62-5)

DNEL	Professional - Inhalation; Short term systemic effects: 0.14 mg/m ³ DNEL Inhalation: Most sensitive endpoint Irritation (respiratory tract). DNEL dermal - no quantitative risk assessment possible. Most sensitive endpoint Irritation (skin). Professional - Inhalation; Short term local effects: 0.14 mg/m ³ Professional - Inhalation; Long term systemic effects: 0.035 mg/m ³ Professional - Inhalation; Long term local effects: 0.035 mg/m ³
PNEC	- Fresh water; 0.013 mg/l - marine water; 0.00125 mg/l - Soil; > 1 mg/kg - STP; >1 mg/l

Calcium neodecanoate (CAS: 27253-33-4)

DNEL	Workers - Inhalation; Long term systemic effects: 1.46 mg/m ³ Workers - Dermal; Long term systemic effects: 0.83 mg/kg/day General population - Inhalation; Long term systemic effects: 0.36 mg/m ³ General population - Dermal; Long term systemic effects: 0.41 mg/kg/day
PNEC	- Fresh water; 0.528 mg/l - marine water; 0.053 mg/l

8.2. Exposure controls

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Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

Wear tight-fitting, chemical splash goggles or face shield.

Hand protection

Wear protective gloves. (DIN EN374). It is recommended that gloves are made of the following material: Butyl rubber. It should be noted that liquid may penetrate the gloves. Frequent changes are recommended.

Other skin and body protection

Wear appropriate clothing to prevent any possibility of skin contact. Wash contaminated clothing before reuse.

Hygiene measures

Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

Respiratory protection

In confined or poorly-ventilated spaces, a supplied-air respirator must be worn.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Light (or pale). Yellow.
pH	Not applicable.
Melting point	Not determined.
Initial boiling point and range	Not determined.
Flash point	>150°C
Vapour pressure	Not determined.
Relative density	Not determined.
Solubility(ies)	Insoluble in water. Reaction with water
Viscosity	Not available.

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity The following materials may react with the product: Acids. Alcohols, glycols. Amines. Strong alkalis. Water.

10.2. Chemical stability

Stability Stable at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions May polymerise. Contact with compounds such as acids, alcohols, caustic soda, amine catalysts etc., should be avoided, as uncontrolled polymerisation with the subsequent evolution of heat may occur.

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10.4. Conditions to avoid

Conditions to avoid Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials

Materials to avoid Avoid contact with moisture and water.

10.6. Hazardous decomposition products

Hazardous decomposition products Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Hazardous decomposition products /combustion products of Isocyanates - oxide(s) of Carbon, Nitrogen, and TOXIC Cyanide compounds.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 5,000.0

Acute toxicity - dermal

Notes (dermal LD₅₀) Not available.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Not available.

ATE inhalation (dusts/mists mg/l) 21.4

Skin corrosion/irritation

Animal data Irritating.

Serious eye damage/irritation

Serious eye damage/irritation Irritating to eyes.

Respiratory sensitisation

Respiratory sensitisation There is evidence that the material can lead to respiratory hypersensitivity.

Skin sensitisation

Skin sensitisation May cause sensitisation by skin contact.

Germ cell mutagenicity

Genotoxicity - in vitro Does not contain any substances known to be mutagenic.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - development May damage the unborn child.

Specific target organ toxicity - single exposure

STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

Toxicological information on ingredients.

N-METHYL-2-PYRROLIDONE

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Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 4,150.0

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 5,000.0

Species Rat

ATE dermal (mg/kg) 5,000.0

Skin corrosion/irritation

Animal data Rabbit Irritating.

Serious eye damage/irritation

Serious eye damage/irritation Irritating to eyes.

Reproductive toxicity

Reproductive toxicity - development May damage the unborn child.

Specific target organ toxicity - single exposure

STOT - single exposure Irritating to respiratory system.

TOLUENE-DIISOCYANATE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 4,130.0

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 9,400.0

Species Rabbit

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ dust/mist mg/l) 0.107

Species Rat

ATE inhalation (dusts/mists mg/l) 0.107

Skin corrosion/irritation

Animal data Rabbit Irritating.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

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Respiratory sensitisation

Respiratory sensitisation Human: Sensitising.

Skin sensitisation

Skin sensitisation Local Lymph Node Assay (LLNA) - Mouse: Sensitising.

Germ cell mutagenicity

Genotoxicity - in vivo This substance has no evidence of mutagenic properties.

Carcinogenicity

Carcinogenicity Suspected carcinogen based on limited evidence.

Reproductive toxicity

Reproductive toxicity - fertility This substance has no evidence of toxicity to reproduction.

Reproductive toxicity - development This substance has no evidence of toxicity to reproduction.

Specific target organ toxicity - single exposure

STOT - single exposure Irritating to respiratory system.

SECTION 12: Ecological information

General

Ecotoxicity Not regarded as dangerous for the environment. The product contains a substance which is harmful to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish No data available.

Ecological information on ingredients.

TOLUENE-DIISOCYANATE

Acute aquatic toxicity

Acute toxicity - fish LC50, 96 hours: > 100 mg/l, Brachydanio rerio (Zebra Fish)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 12.5 mg/l, Daphnia magna

Acute toxicity - microorganisms EC₅₀, 3 hours: > 100 mg/l, Activated sludge

12.2. Persistence and degradability

Persistence and degradability There are no data on the degradability of this product.

Ecological information on ingredients.

TOLUENE-DIISOCYANATE

Persistence and degradability The product is not biodegradable.

12.3. Bioaccumulative potential

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Bioaccumulative potential No data available on bioaccumulation.

Ecological information on ingredients.

TOLUENE-DIISOCYANATE

Partition coefficient log Pow: 3.43

12.4. Mobility in soil

Mobility The product has poor water-solubility.

12.5. Results of PBT and vPvB assessment

12.6. Other adverse effects

Other adverse effects Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Waste is classified as hazardous waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Number. EWC 070214.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

Proper shipping name (ADR/RID) Not classified as hazardous for transport

14.3. Transport hazard class(es)

Not applicable.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

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

SECTION 15: Regulatory information

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

National regulations The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).

VULCABOND MDX

EU legislation	Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Guidance	Workplace Exposure Limits EH40. CHIP for everyone HSG228. Approved Classification and Labelling Guide (Sixth edition) L131.
Restrictions (Annex XVII Regulation 1907/2006)	Entry number: 71

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
Issued by	L Hadcroft
Revision date	22/12/2021
Revision	8
Supersedes date	24/03/2020
SDS number	10256
SDS status	Approved.
Hazard statements in full	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H330 Fatal if inhaled. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 May cause respiratory irritation. H351 Suspected of causing cancer. H360D May damage the unborn child. H412 Harmful to aquatic life with long lasting effects.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.