SAFETY DATA SHEET
VULCABOND TP

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 TP

Product number P40127

UFI UFI: K24K-M3CA-Q007-X2AR

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

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

Environmental hazards Not Classified

2.2. Label elements

Hazard pictograms

Signal word Danger

VULCABOND TP

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.
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, 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

Toluene diisocyanate homopolymer **10-30%**

CAS number: 9017-01-0

Classification
Skin Irrit. 2 - H315
Eye Irrit. 2 - H319
Skin Sens. 1 - H317

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.

SECTION 4: First aid measures

4.1. Description of first aid measures

VULCABOND TP

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 Vapours may irritate throat/respiratory system. A single exposure may cause the following adverse effects: Coughing. Difficulty in breathing. Asthma, pulmonary sensitisation.

Skin contact May cause sensitisation or allergic reactions in sensitive individuals.

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

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 Wear protective clothing as described in Section 8 of 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.

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

VULCABOND TP

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

TOLUENE-DIISOCYANATE

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.

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).

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

DNEL
Professional - Inhalation; Short term systemic effects: 0.14 mg/m³
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/m³
Professional - Inhalation; Long term systemic effects: 0.035 mg/m³
Professional - Inhalation; Long term local effects: 0.035 mg/m³

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/m³
Workers - Dermal; Long term systemic effects: 0.83 mg/kg/day
General population - Inhalation; Long term systemic effects: 0.36 mg/m³
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

Protective equipment

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

VULCABOND TP

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	Clear liquid. Light (or pale).
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
Partition coefficient	Not determined.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not determined.
Viscosity	2000-3000 mPa s @ 25°C

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.

10.4. Conditions to avoid

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

VULCABOND TP

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 (LD_{50} mg/kg) 5,000.0

Acute toxicity - dermal

Notes (dermal LD_{50}) Not determined.

Acute toxicity - inhalation

Notes (inhalation LC_{50}) Not determined.

ATE inhalation (dusts/mists mg/l) 21.4

Skin corrosion/irritation

Animal data Irritating to skin.

Serious eye damage/irritation

Serious eye damage/irritation Moderately irritating.

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. Bridging principle (Dilution).

Reproductive toxicity

Reproductive toxicity - fertility Does not contain any substances known to be toxic to reproduction.

Reproductive toxicity - development Does not contain any substances known to be toxic to reproduction.

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.

Aspiration hazard

Aspiration hazard Not anticipated to present an aspiration hazard, based on chemical structure.

Toxicological information on ingredients.

VULCABOND TP

TOLUENE-DIISOCYANATE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	4,130.0
Species	Rat

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	9,400.0
Species	Rabbit

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} 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.

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

VULCABOND TP

Ecotoxicity The product is not expected to be hazardous to 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

Toxicity No data is available on the preparation itself. The product should be prevented from entering drains, sewers, streams, etc.

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	EC_{50}, 48 hours: 12.5 mg/l, Daphnia magna
Acute toxicity - microorganisms	EC_{50}, 3 hours: > 100 mg/l, Activated sludge

12.2. Persistence and degradability

Persistence and degradability The product is not expected to be biodegradable.

Ecological information on ingredients.

TOLUENE-DIISOCYANATE

Persistence and degradability The product is not biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient Not determined.

Ecological information on ingredients.

TOLUENE-DIISOCYANATE

Partition coefficient log Pow: 3.43

12.4. Mobility in soil

Mobility No data available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

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.

VULCABOND TP

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

14.2. UN proper shipping name

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

14.3. Transport hazard class(es)

14.4. Packing group

14.5. Environmental hazards

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).

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.

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 5

Supersedes date 20/08/2018

SDS number 10486

SDS status Approved.

VULCABOND TP

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.
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.