SAFETY DATA SHEET
VULCABOND NP4043

According to Regulation (EC) No 1907/2006, Annex II, as amended. Regulation 2020/878

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

1.1. Product identifier

Product name VULCABOND NP4043

Product number P40380

UFI UFI: TTTK-N3YS-600E-9ES2

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 Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317

Environmental hazards Aquatic Chronic 2 - H411

2.2. Label elements

Hazard pictograms

Signal word Danger

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Hazard statements	H302 Harmful if swallowed. 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. H411 Toxic to aquatic life with long lasting effects.
Precautionary statements	P261 Avoid breathing vapour/ spray. P273 Avoid release to the environment. 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	BENZYL BENZOATE, Toluene diisocyanate homopolymer, TOLUENE-DIISOCYANATE
Supplementary precautionary statements	P264 Wash contaminated skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P272 Contaminated work clothing should not be allowed out of the workplace. P284 [In case of inadequate ventilation] wear respiratory protection. P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. 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. P391 Collect spillage.

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

BENZYL BENZOATE **60-100%**

CAS number: 120-51-4 EC number: 204-402-9

Classification
Acute Tox. 4 - H302
Aquatic Chronic 2 - H411

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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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 For details of SCL, M Factors, and ATE please see sections 11 and 12.

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. Irritating.

Eye contact Causes serious eye irritation.

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.

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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

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

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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.
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	Straw.
Odour threshold	Not determined.
pH	Not applicable.
Melting point	Not determined.
Initial boiling point and range	Not determined.
Flash point	>140°C Estimated value.
Evaporation rate	Not determined.
Upper/lower flammability or explosive limits	Not relevant.

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Vapour pressure	Not determined.
Vapour density	Not determined.
Relative density	Not determined.
Bulk density	Not applicable.
Solubility(ies)	Insoluble in water. Reaction with water
Partition coefficient	Not determined.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not determined.
Viscosity	9-10 Pa s @ 25°C
Explosive properties	No information 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.

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

ATE oral (mg/kg) 737.02

Acute toxicity - dermal

Notes (dermal LD_{50}) Not determined.

Acute toxicity - inhalation

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ATE inhalation (dusts/mists mg/l)	21.4

Skin corrosion/irritation

Animal data	Irritating to skin.

Serious eye damage/irritation

Serious eye damage/irritation	Irritating to eyes.

Respiratory sensitisation

Respiratory sensitisation	Toluene diisocyanate specific concentration limit: Resp. Sens. 1; H334: C ≥ 0,1 %

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 - 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.

General information	Not considered an endocrine disruptor based on current criteria.

Toxicological information on ingredients.

BENZYL BENZOATE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	1,160.0
Species	Rat
ATE oral (mg/kg)	500.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	4,400.0
Species	Rabbit

TOLUENE-DIISOCYANATE

Acute toxicity - oral

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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

Ecotoxicity 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

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

Ecological information on ingredients.

BENZYL BENZOATE

Acute aquatic toxicity

Acute toxicity - fish	LC_{50}, 96 hours: 2.32 mg/l, Brachydanio rerio (Zebra Fish)
Acute toxicity - aquatic invertebrates	EC_{50}, 24 hours: 4.26 mg/l, Daphnia magna EC_{50}, 48 hours: 3.09 mg/l, Daphnia magna LC_{50}, 24 hours: 11 mg/l, Daphnia magna LC_{50}, 48 hours: 7.77 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, 72 hours: 0.475 mg/l, Selenastrum capricornutum NOEC, 72 hours: 0.247 mg/l, Selenastrum capricornutum
Acute toxicity - microorganisms	EC_{50}, 3 hours: >10000 mg/l, Activated sludge

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates	NOEC, 21 days: 0.258 mg/l, Daphnia magna LOEC, 21 days: 0.455 mg/l, Daphnia magna

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 No data available.

Ecological information on ingredients.

BENZYL BENZOATE

Persistence and degradability	The substance is readily biodegradable.

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.

BENZYL BENZOATE

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Partition coefficient log Kow: 3.97

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

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

12.6. Other adverse effects

Other adverse effects Not considered an endocrine disruptor based on current criteria.

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

14.1. UN number

UN No. (ADR/RID) UN3082

UN No. (IMDG) UN3082

UN No. (ICAO) UN3082

14.2. UN proper shipping name

Proper shipping name (ADR/RID) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains benzyl benzoate) MARINE POLLUTANT

Proper shipping name (IMDG) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains benzyl benzoate) MARINE POLLUTANT

Proper shipping name (ICAO) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains benzyl benzoate) MARINE POLLUTANT

14.3. Transport hazard class(es)

ADR/RID class 9

IMDG class 9

ICAO class/division 9

Transport labels

14.4. Packing group

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ADR/RID packing group	III
IMDG packing group	III
ICAO packing group	III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

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

Issued by	L Hadcroft
Revision date	13/12/2022
Revision	5
Supersedes date	22/12/2021
SDS number	30214
SDS status	Approved.
Hazard statements in full	H302 Harmful if swallowed. 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. H411 Toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects.

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