

Safety Data Sheet

MAPEFLOOR PU 410 part B

Safety Data Sheet dated: 5/6/2019 - version 1

Section 1. Identification of the substance and supplier

Product identifier

Mixture identification:

Trade name: MAPEFLOOR PU 410 part B

Trade code: 9025898

Recommended use of the chemical and restrictions on use

Recommended use: Hardener for polyurethane-based adhesives

Uses advised against: Data not available

Supplier's details

Company: MBP (NZ) Ltd. - 88 Carbine Road, Mount Wellington, Auckland 1060, New Zealand Email: enquiries@MBPLtd.co.nz

Website: www.MBPLtd.co.nz - Phone: +64 9 921 1994 (Mon-Fri 9am-5pm) - Fax: +64 9 921 1993

Emergency phone number

New Zealand Poisons Centre: Ph: 0800 764 766

Section 2. Hazards identification

HSNO hazard classification

Classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2017.

HSNO classification:

6.3A	H315 - Causes skin irritation.
6.4A	H319 - Causes serious eye irritation.
6.5A	H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
6.5B	H317 - May cause an allergic skin reaction.
6.7B	H351.G - Suspected of causing cancer if inhaled, in contact with skin and if swallowed.
6.1E (respiratory tract irritant)	H335 - May cause respiratory irritation.
6.9B (Repeated exposure)	H373.G - May cause damage to organs through prolonged or repeated exposure if inhaled, in contact with skin and if swallowed.

Hazard information

Pictograms and Signal Words



Danger

Hazard statements:

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer if inhaled, in contact with skin and if swallowed.
H373	May cause damage to organs through prolonged or repeated exposure if inhaled, in contact with skin and if swallowed.

Precautionary statements:

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P281	Use personal protective equipment as required.
P285	In case of inadequate ventilation wear respiratory protection.

P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P304+P341	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P314	Get medical advice/attention if you feel unwell.
P321	Specific treatment (see supplementary instructions on this label).
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P362	Take off contaminated clothing and wash before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container in accordance with applicable regulations.

Other hazards which do not result in a classification

No other hazards

Section 3. Composition/information on ingredients

Substances

N.A.

Mixtures

Mixture identification: MAPEFLOOR PU 410 part B

Hazardous components within the meaning of HSNO Act and related classification

Quantity	Name	Ident. Numb.	Classification
≥75 - <100 %	diphenylmethanediisocyanate isomers and homologues	CAS:9016-87-9 EC:618-498-9 Index:615-005-00-9	6.1D (inhalation), H332; 6.4A, H319; 6.1E (respiratory tract irritant), H335; 6.3A, H315; 6.5A, H334; 6.5B, H317; 6.9B (Repeated exposure), H373; 6.7B, H351
≥10 - <20 %	4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate	CAS:101-68-8 EC:202-966-0 Index:615-005-00-9	6.1D (inhalation), H332; 6.4A, H319; 6.1E (respiratory tract irritant), H335; 6.3A, H315; 6.5A, H334; 6.5B, H317; 6.9B (Repeated exposure), H373; 6.7B, H351
≥5 - <10 %	o-(p-isocyanatobenzyl)phenyl isocyanate; diphenylmethane-2,4'-diisocyanate	CAS:5873-54-1 EC:227-534-9 Index:615-005-00-9	6.7B, H351; 6.9B (Repeated exposure), H373; 6.4A, H319; 6.1E (respiratory tract irritant), H335; 6.3A, H315; 6.5A, H334; 6.5B, H317; 6.1D (inhalation), H332
≥0.49 - <1 %	2,2'-methylenediphenyl diisocyanate; diphenylmethane-2,2'-diisocyanate	CAS:2536-05-2 EC:219-799-4 Index:615-005-00-9	6.7B, H351; 6.9B (Repeated exposure), H373; 6.4A, H319; 6.1E (respiratory tract irritant), H335; 6.3A, H315; 6.5A, H334; 6.5B, H317; 6.1D (inhalation), H332

Section 4. First aid measures

Description of necessary first aid measures

In case of skin contact:

- Immediately take off all contaminated clothing.
- Remove contaminated clothing immediately and dispose of safely.
- After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

- After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.
- Protect uninjured eye.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and the hazard label.

In case of Inhalation:

If breathing is irregular or stopped, administer artificial respiration.

In case of inhalation, consult a doctor immediately and show him packing or label.

Indication of immediate medical attention and special treatment needed, if necessary

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Most important symptoms/effects, acute and delayed

Eye irritation

Eye damages

Skin Irritation

Erythema

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO₂).

Unsuitable extinguishing media:

None in particular.

Specific hazards arising from the chemical

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

Hazardous combustion products: N.A.

Explosive properties: N.D.

Oxidizing properties: N.A.

Special protective equipment and precautions for fire-fighters

Use suitable breathing apparatus.

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

Use appropriate respiratory protection.

See protective measures under point 7 and 8.

Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

Methods and materials for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand

Wash with plenty of water.

Section 7. Handling and storage

Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Exercise the greatest care when handling or opening the container.

Do not use on extensive surface areas in premises where there are occupants.

Use localized ventilation system.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

Conditions for safe storage, including any incompatibilities

Always keep in a well ventilated place.

Incompatible materials:

None in particular.

Instructions as regards storage premises:
Cool and adequately ventilated.

Section 8. Exposure controls/personal protection

Workplace Exposure Standards

Predicted No Effect Concentration (PNEC) values

Component	CAS-No.	PNEC LIMIT	Exposure Route	Exposure Frequency	Remark
4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate	101-68-8	1 mg/l	Fresh Water		
		0,1 mg/l	Marine water		
		1 mg/kg	Soil		
o-(p-isocyanatobenzyl)phenyl isocyanate; diphenylmethane-2,4'-diisocyanate	5873-54-1	1 mg/l	Fresh Water		
		0,1 mg/l	Marine water		
		1 mg/kg	Soil		
2,2'-methylenediphenyl diisocyanate; diphenylmethane-2,2'-diisocyanate	2536-05-2	1 mg/l	Fresh Water		
		0,1 mg/kg	Marine water		
		1 mg/l	Soil		
		1 mg/l	Microorganisms in sewage treatments		
		1 mg/l	Microorganisms in sewage treatments		
		1 mg/l	Microorganisms in sewage treatments		

Derived No Effect Level. (DNEL)

Component	CAS-No.	Worker Industrial	Worker Professional	Consumer	Exposure Route	Exposure Frequency	Remark
4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate	101-68-8	50 mg/kg			Human Dermal	Short Term, systemic effects	
		0,1 mg/m3			Human Inhalation	Short Term, systemic effects	
		0,1 mg/m3			Human Inhalation	Short Term, local effects	
		0,05 mg/m3			Human Inhalation	Long Term, systemic effects	
		0,05 mg/m3			Human Inhalation	Long Term, local effects	

		25 mg/kg	Human Dermal	Short Term, systemic effects
		0,05 mg/m3	Human Inhalation	Short Term, systemic effects
		20 mg/kg	Human Oral	Short Term, systemic effects
		0,05 mg/m3	Human Inhalation	Short Term, local effects
		0,025 mg/m3	Human Inhalation	Long Term, systemic effects
		0,025 mg/m3	Human Inhalation	Long Term, local effects
		28,7 mg/cm2	17,2 mg/cm2 Human Dermal	Short Term, local effects
o-(p-isocyanatobenzyl) phenyl isocyanate; diphenylmethane-2,4'-diisocyanate	5873-54-1	50 mg/kg	25 mg/kg Human Dermal	Short Term, systemic effects
		0,1 mg/m3	0,05 mg/m3 Human Inhalation	Short Term, systemic effects
		28,7 mg/cm2	17,2 mg/cm2 Human Dermal	Short Term, local effects
		0,1 mg/m3	0,05 mg/m3 Human Inhalation	Short Term, local effects
		0,05 mg/m3	0,025 mg/m3 Human Inhalation	Long Term, systemic effects
		0,05 mg/m3	0,025 mg/m3 Human Inhalation	Long Term, local effects
			20 mg/kg Human Oral	Short Term, systemic effects
2,2'-methylenediphenyl diisocyanate; diphenylmethane-2,2'-diisocyanate	2536-05-2	50 mg/kg	25 mg/kg Human Dermal	Short Term, systemic effects
		0,1 mg/m3	0,05 mg/m3 Human Inhalation	Short Term, systemic effects
		28,7 mg/cm2	17,2 mg/cm2 Human Dermal	Short Term, local effects
		0,1 mg/m3	0,05 mg/m3 Human Inhalation	Short Term, local effects
		0,05 mg/m3	0,025 mg/m3 Human Inhalation	Long Term, systemic effects
		0,05 mg/m3	0,025 mg/m3 Human Inhalation	Long Term, local effects
			20 mg/kg Human Oral	Long Term, systemic effects

Engineering Controls

N.A.

Personal Protective Equipment (PPE)

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

CR (polychloroprene, chloroprene rubber).; NBR (nitrile rubber).; Butyl caoutchouc (butyl rubber).; FKM (fluoro rubber).

Respiratory protection:

Mask with filter "A" , brown colour; Mask with filter "P", white colour

Thermal Hazards:

N.A.

Section 9. Physical and chemical properties

Physical state: Liquid

Appearance and colour: liquid yellow

Odour: characteristic

Odour threshold: N.D.

pH: N.A.

Melting point / freezing point: N.A.

Initial boiling point and boiling range: >100 °C (>212 °F)

Flash point: >250 °C (482 °F)

Flammability (Solid, Gas): N.D.

Upper/lower flammability or explosive limits: N.A.

Vapour pressure: 14.00

Vapour density: N.D.

Relative density: 1.22 g/cm³

Solubility in water: non miscibile a 20°C

Solubility in oil: N.D.

Partition coefficient (n-octanol/water): N.A.

Auto-ignition temperature: N.A.

Decomposition temperature: N.A.

Kinematic viscosity: N.A.

Particle characteristics: No Data Available

Section 10. Stability and reactivity

Reactivity

Stable under normal conditions

Chemical stability

Data not available.

Possibility of hazardous reactions

None.

Conditions to avoid

Stable under normal conditions.

Incompatible materials

None in particular.

Hazardous decomposition products

Section 11. Toxicological information

Information on toxicological effects

Toxicological information of the mixture:

MAPEFLOOR PU 410 part a) acute toxicity LD50 Oral Rat > 2000 mg/kg

B

LC50 Inhalation Rat = 490 mg/m³ 4h

Toxicological information on main components of the mixture:

diphenylmethanediisocyanate isomers and homologues a) acute toxicity LD50 Oral Rat > 10000 mg/kg

LD50 Skin Rabbit > 9400 mg/kg

LC50 Inhalation Dust Rat = 0,31 mg/l 4h

g) reproductive toxicity NOAEL Inhalation Rat = 12 mg/m³

4,4'-methylenediphenyl diisocyanate; a) acute toxicity LD50 Oral Rat > 2000 mg/kg

diphenylmethane-4,4'-

diisocyanate

		LD50 Skin Rabbit > 9400 mg/kg	
		LC50 Inhalation Dust Rat = 0,368 mg/l 4h	
b) skin corrosion/irritation	Skin Irritant Skin Rabbit	Positive	
d) respiratory or skin sensitisation	Skin Sensitization Skin Mouse	Positive	
		Respiratory Sensitization Inhalation	Positive
f) carcinogenicity	Carcinogenicity Inhalation Rat = 6 mg/m3		2 y
g) reproductive toxicity	NOAEL Inhalation Rat = 12 mg/m3		20 d
o-(p-isocyanatobenzyl)phenyl isocyanate; diphenylmethane-2,4'-diisocyanate	a) acute toxicity	LD50 Skin Rabbit > 9400 mg/kg	
		LD50 Oral Rat > 2000 mg/kg	
e) germ cell mutagenicity	NOAEL Inhalation Rat = 12 mg/m3		
2,2'-methylenediphenyl diisocyanate; diphenylmethane-2,2'-diisocyanate	a) acute toxicity	LD50 Oral Rat > 2000 mg/kg	
		LC50 Inhalation Dust Rat = 0,527 mg/l 4h	
		LD50 Skin Rabbit > 9400 mg/kg	
e) germ cell mutagenicity	NOAEL Inhalation Rat = 12 mg/m3		

If not differently specified, the information required in the regulation and listed below must be considered as N.A.

- a) acute toxicity
- b) skin corrosion/irritation
- c) serious eye damage/irritation
- d) respiratory or skin sensitisation
- e) germ cell mutagenicity
- f) carcinogenicity
- g) reproductive toxicity
- h) STOT-single exposure
- i) STOT-repeated exposure
- j) aspiration hazard

Section 12. Ecological information

Ecotoxicity

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

List of components with eco-toxicological properties

Quantity	Component	Ident. Numb.	Ecotox Infos
>=75 - <100 %	diphenylmethanediisocyanate isomers and homologues	CAS: 9016-87-9 - EINECS: 618-498-9 - INDEX: 615-005-00-9	a) Aquatic acute toxicity : LC50 Fish > 1000 mg/L 96 a) Aquatic acute toxicity : EC50 Daphnia > 1000 mg/L 24 b) Aquatic chronic toxicity : NOEC Daphnia > 10 mg/L - 21 d a) Aquatic acute toxicity : EC50 Algae > 1640 mg/L 72 c) Bacteria toxicity : EC50 > 100 mg/L 3 d) Terrestrial toxicity : NOEC > 1000 mg/kg - 14 d e) Plant toxicity : NOEC > 1000 mg/kg - 14 d

>=10 - <20 %	4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate	CAS: 101-68-8 - EINECS: 202-966-0 - INDEX: 615-005-00-9	a) Aquatic acute toxicity : LC50 Fish > 1000 mg/L 96 a) Aquatic acute toxicity : EC50 Daphnia > 1000 mg/L 24 b) Aquatic chronic toxicity : NOEC Daphnia > 10 mg/L - 21 d a) Aquatic acute toxicity : EC50 Algae > 1640 mg/L 72 c) Bacteria toxicity : EC50 > 100 mg/L 3 d) Terrestrial toxicity : NOEC > 1000 mg/kg - 14 d e) Plant toxicity : NOEC > 1000 mg/kg - 14 d
>=5 - <10 %	o-(p-isocyanatobenzyl)phenyl isocyanate; diphenylmethane-2,4'-diisocyanate	CAS: 5873-54-1 - EINECS: 227-534-9 - INDEX: 615-005-00-9	a) Aquatic acute toxicity : LC50 Fish > 1000 mg/L 96 a) Aquatic acute toxicity : EC50 Daphnia > 1000 mg/L 24 b) Aquatic chronic toxicity : NOEC Daphnia > 10 mg/L - 21 d a) Aquatic acute toxicity : EC50 Algae > 1640 mg/L 72 c) Bacteria toxicity : EC50 > 100 mg/L 3 d) Terrestrial toxicity : NOEC > 1000 mg/kg - 14 d e) Plant toxicity : NOEC > 1000 mg/kg - 14 d
>=0.49 - <1 %	2,2'-methylenediphenyl diisocyanate; diphenylmethane-2,2'-diisocyanate	CAS: 2536-05-2 - EINECS: 219-799-4 - INDEX: 615-005-00-9	a) Aquatic acute toxicity : LC50 Fish > 1000 mg/L 96 a) Aquatic acute toxicity : EC50 Daphnia > 1000 mg/L 24 b) Aquatic chronic toxicity : NOEC Daphnia > 10 mg/L - 21 d a) Aquatic acute toxicity : EC50 Algae > 1640 mg/L 72 c) Bacteria toxicity : EC50 > 100 mg/L 3 e) Plant toxicity : NOEC > 1000 mg/kg - 14 d d) Terrestrial toxicity : NOEC > 1000 mg/kg - 14 d

Persistence and degradability

N.A.

Bioaccumulative potential

N.A.

Mobility in soil

N.A.

Other adverse effects

N.A.

Section 13. Disposal considerations

Disposal methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

Special precautions to be taken during disposal

No Data Available

Section 14. Transport information

Not classified as dangerous in the meaning of transport regulations.

UN number

N.A.

UN proper shipping name

N.A.

Transport hazard class(es)

N.A.

Packing group, if applicable

N.A.

Environmental hazards

N.A.

No

Special precautions for user

NZS-Subsidiary risks: N.A.

NZS-Special Dispositions: N.A.

Road and Rail (ADR-RID):

N.A.

ADR-Hazard identification number: NA

Air (IATA):

N.A.

Sea (IMDG):

N.A.

Section 15. Regulatory information

HSNO Approval

HSNO approval number and group standard title:

HSR002679 - Surface Coatings and Colourants (Toxic [6.7]) Group Standard 2006

HSNO Controls

Certified Handler

No Data Available

New Zealand Inventory of Chemicals (NZIoC)

All components are listed on the NZIoC Inventory.

Regulatory references

Preparation of Safety Data Sheets - Approved Code of Practice Under the HSNO Act 1996 (HSNO CoP 8-1 09-06).

Hazardous Substances (Classification) Regulations 2001.

Labelling of Hazardous Substances: Hazard and Precautionary Information (January 2012 EPA0094).

Assigning a Product to a HSNO Approval (May 2013/Revised June 2014).

Section 16. Other information

Safety Data Sheet dated: 5/6/2019 - version 1

Code	Description
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 .
H351	Suspected of causing cancer if inhaled, in contact with skin and if swallowed.
H373	May cause damage to organs through prolonged or repeated exposure .
H373	May cause damage to organs through prolonged or repeated exposure if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure if inhaled, in contact with skin and if swallowed.

Description of the HSNO Classification codes used in section 2 or 3:

Code	Description
6.1D (inhalation)	Substances that are acutely toxic - Harmful (inhalation).
6.1E (respiratory tract irritant)	Respiratory tract irritant.
6.3A	Substances that are irritating to the skin.
6.4A	Substances that are irritating to the eye.
6.5A	Substances that are respiratory sensitisers.
6.5B	Substances that are contact sensitisers.
6.7B	Substances that are suspected human carcinogens.
6.9B (Repeated exposure)	Substances that are harmful to human target organs or systems (Repeated exposure).

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This SDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.

IMDG: International Maritime Code for Dangerous Goods.

IATA: International Air Transport Association.

IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO: International Civil Aviation Organization.

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

CLP: Classification, Labeling, Packaging.

EINECS: European Inventory of Existing Commercial Chemical Substances.

INCI: International Nomenclature of Cosmetic Ingredients.

CAS: Chemical Abstracts Service (division of the American Chemical Society).

GefStoffVO: Ordinance on Hazardous Substances, Germany.

LC50: Lethal concentration, for 50 percent of test population.

LD50: Lethal dose, for 50 percent of test population.

DNEL: Derived No Effect Level.

PNEC: Predicted No Effect Concentration.

TLV: Threshold Limiting Value.

TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).

STEL: Short Term Exposure limit.

STOT: Specific Target Organ Toxicity.

WGK: German Water Hazard Class.

KSt: Explosion coefficient.

HSNO: Hazardous Substances and New Organisms Act 1996.