

## Safety Data Sheet

### MAPEFLEX P2 NS PART A

Safety Data Sheet dated: 04/20/2022 - version 8

Date of first edition: 08/03/2017



## 1. IDENTIFICATION

### Product identifier

Mixture identification:

Trade name: MAPEFLEX P2 NS PART A

Trade code: 9019103

### Recommended use of the chemical and restrictions on use

Recommended use: Polyurethane-based adhesive

Restrictions on use: Not available

### Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Company: MAPEI CORP. (USA and Puerto Rico)

1144 East Newport Center Drive - 33442 - Deerfield Beach - FL - USA

Phone: 954-246-8888

Responsible: RDProductSafety@mapei.com

### Emergency 24 hour numbers:

Emergency Number (USA/Canada) CHEMTREC 1(800) 424-9300 / 1(703) 527-3887

Emergency Transport CANUTEC (Canada) 1-613-996-6666

## 2. HAZARD(S) IDENTIFICATION



### Classification of the chemical

Eye Irrit. 2A

Causes serious eye irritation.

Skin Sens. 1

May cause an allergic skin reaction.

### Label elements

#### Hazard pictograms and Signal Word



Warning

### Hazard statements

H317

May cause an allergic skin reaction.

H319

Causes serious eye irritation.

### Precautionary statements

P201

Obtain special instructions before use.

P202

Do not handle until all safety precautions have been read and understood.

P261

Avoid breathing mist/vapours/spray.

P264

Wash hands thoroughly after handling.

P272

Contaminated work clothing should not be allowed out of the workplace.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352

IF ON SKIN: Wash with plenty of water.

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.

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.

P363

Wash contaminated clothing before reuse.

P405

Store locked up.

P501

Dispose of contents/container in accordance with applicable regulations.

**Ingredient(s) with unknown acute toxicity:**

None

**Hazards not otherwise classified identified during the classification process:**

None

This product contains titanium dioxide which IARC has classified as a Group 2B carcinogen (possibly carcinogenic to humans). Evidence is based on sufficient animal testing as a result of long-term inhalation at high concentrations of respirable amounts of titanium dioxide. Because this product is in liquid or paste form, it does not pose a dust hazard; therefore, this classification is not relevant. (Note: sanding of the hardened product may create a dust hazard)

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**3. COMPOSITION/INFORMATION ON INGREDIENTS****Substances**

Not Relevant

**Mixtures**

Hazardous components within the meaning of 29 CFR 1910.1200 and related classification:

**List of components**

Concentration (%) w/w)	Name	Ident. Numb.	Classification	Registration Number
2.5-5 %	titanium dioxide; Dioxotitanium	CAS:13463-67-7 EC:236-675-5 Index:022-006-00-2	Carc. 2, H351	
2.5-5 %	calcium oxide; quicklime	CAS:1305-78-8 EC:215-138-9	Skin Irrit. 2, H315; STOT SE 3, H335; Eye Dam. 1, H318	
1-2.5 %	xylenes; 1,2 dimethylbenzene	CAS:1330-20-7 EC:215-535-7 Index:601-022-00-9	Flam. Liq. 3, H226; Acute Tox. 4, H332; Acute Tox. 4, H312; Skin Irrit. 2, H315	
0.25-0.49 %	ethyl benzene; aethylbenzol	CAS:100-41-4 EC:202-849-4 Index:601-023-00-4	Flam. Liq. 2, H225; Acute Tox. 4, H332; Asp. Tox. 1, H304	
0.1-0.25 %	bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate; Decanedioic acid, bis(1,2,2,6,6-pentamethyl-4-piperidiny) ester	CAS:41556-26-7 EC:255-437-1	Skin Sens. 1, H317; Aquatic Acute 1, H400; Aquatic Chronic 1, H410	

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**4. FIRST AID MEASURES****Description of first aid measures**

In case of skin contact:

Immediately take off all contaminated clothing.  
OBTAIN IMMEDIATE MEDICAL ATTENTION.  
Obtain medical attention if skin related symptoms persist.  
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:

Remove casualty to fresh air and keep warm and at rest.

**Most important symptoms/effects, acute and delayed**

Eye irritation

Eye damages

**Indication of any immediate medical attention and special treatment needed**

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

Treatment:

(see paragraph 4.1)

## 5. FIRE-FIGHTING MEASURES

### Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO<sub>2</sub>).

### 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: Not available

Explosive properties: Not Relevant

Oxidizing properties: Not Relevant

### 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.

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## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

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

Limit leakages with earth or sand.

### Methods and material for containment and cleaning up

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

Retain contaminated washing water and dispose it.

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## 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.

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

Storage temperature: Not available

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### List of components with OEL value

Component	OEL Type	Country	Ceiling	Long Term mg/m <sup>3</sup>	Long Term ppm	Short Term mg/m <sup>3</sup>	Short Term ppm	Behaviour	Note
titanium dioxide; Dioxotitanium	OSHA			15					
	ACGIH			10					A4 - Not Classifiable as a Human Carcinogen; lower respiratory tract irritation;
	MAK	GERMANY		0.3					
	ACGIH			10					A4 - Not Classifiable as a Human Carcinogen; lower respiratory tract irritation

calcium oxide; quicklime	MAK	AUSTRIA	5		10				
	MAK	SWITZERLAND	3						
	OSHA		5						
	ACGIH		2					upper respiratory tract irritation;	
xylenes; 1,2 dimethylbenzene	MAK	GERMANY	1						
	ACGIH		2					upper respiratory tract irritation	
	MAK	AUSTRIA	1		4				
	MAK	SWITZERLAND	2						
	OSHA		435	100					
	ACGIH			100		150		A4 - Not Classifiable as a Human Carcinogen; CNS impairment; eye and upper respiratory tract irritation;	
	EU		221	50	442	100	Indicative	Possibility of significant uptake through the skin;	
	MAK	GERMANY	220	50					
	ACGIH			100		150		A4 - Not Classifiable as a Human Carcinogen; CNS impairment; eye and upper respiratory tract irritation	
	MAK	AUSTRIA	221	50	442	100			
ethyl benzene; aethylbenzol	MAK	SWITZERLAND	435	100					
	EU		221	50	442	100	Indicative	Possibility of significant uptake through the skin (pure)	
	OSHA		435	100					
	ACGIH			20				A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans; upper respiratory tract irritation; kidney damage (nephropathy); cochlear impairment;	
	EU		442	100	884	200	Indicative	Possibility of significant uptake through the skin;	
	MAK	GERMANY	88	20					
	ACGIH			20				A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans; upper respiratory tract irritation; kidney damage (nephropathy); cochlear impairment	
	MAK	AUSTRIA	440	100	880	200			
	MAK	SWITZERLAND	220	50					
	EU		442	100	884	200	Indicative	Possibility of significant uptake through the skin	

#### Biological Exposure Index

Component	CAS-No.	Value	UoM	Medium	Biological Indicator	Sampling Period
xylenes; 1,2 dimethylbenzene	1330-20-7	1,5	GGCREAT	Urine	Methyl uric Acid	End of turn

ethyl benzene; aethylbenzol	100-41-4	0,7	GGCREAT	Urine	Mandelic acid and fenilgliossalico	End of turn; End of working week
				Air at the end of exhalation	Ethylbenzene	Not critical
		0,15	GGCREAT	Urine	Mandelic acid and fenilgliossalico	End of turn

Appropriate engineering controls: Not available

#### Individual protection measures

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:

Suitable materials for safety gloves; 29 CFR 1910.138 - ANSI/ISEA 105:

Polychloroprene - CR: thickness  $\geq 0,5\text{mm}$ ; breakthrough time  $\geq 480\text{min}$ .

Nitrile rubber - NBR: thickness  $\geq 0,35\text{mm}$ ; breakthrough time  $\geq 480\text{min}$ .

Butyl rubber - IIR: thickness  $\geq 0,5\text{mm}$ ; breakthrough time  $\geq 480\text{min}$ .

Fluorinated rubber - FKM: thickness  $\geq 0,4\text{mm}$ ; breakthrough time  $\geq 480\text{min}$ .

Use impervious gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:

Respiratory protection must be used where exposure levels exceed workplace exposure limits. Refer to 29 CFR 1910.134 - CSA Z94.4 for information on selection and use of appropriate respiratory protection equipment.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Physical state: Liquid

Appearance and colour: paste Grey

Odour: almost odorless

Odour threshold: Not Relevant

pH: Not Relevant

Melting point / freezing point: Not Relevant

Initial boiling point and boiling range: Not Relevant

Flash point: 100 °C (212 °F)

Evaporation rate: Not Relevant

Upper/lower flammability or explosive limits: Not Relevant

Vapour density: Not Relevant

Vapour pressure: Not Relevant

Relative density: 1.50 g/cm<sup>3</sup>

Solubility in water: insoluble

Solubility in oil: Soluble

Partition coefficient (n-octanol/water): Not Relevant

Auto-ignition temperature: Not Relevant

Decomposition temperature: Not Relevant

Viscosity: Not Relevant

Explosive properties: Not Relevant

Oxidizing properties: Not Relevant

Solid/gas flammability: Not Relevant

### Other information

Substance Groups relevant properties Not Relevant

Miscibility: Not Relevant

Fat Solubility: Not Relevant

Conductivity: Not Relevant

## 10. STABILITY AND REACTIVITY

### Reactivity

Stable

### Chemical stability

Data not available.

### Possibility of hazardous reactions

None.

**Conditions to avoid**

No data available

**Incompatible materials**

Data not available.

**Hazardous decomposition products**

Data not available.

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**11. TOXICOLOGICAL INFORMATION****Information on toxicological effects****Toxicological information of the product:**

a) acute toxicity	Not classified Based on available data, the classification criteria are not met
b) skin corrosion/irritation	Not classified Based on available data, the classification criteria are not met
c) serious eye damage/irritation	The product is classified: Eye Irrit. 2A(H319)
d) respiratory or skin sensitisation	The product is classified: Skin Sens. 1(H317)
e) germ cell mutagenicity	Not classified Based on available data, the classification criteria are not met
f) carcinogenicity	Not classified Based on available data, the classification criteria are not met
g) reproductive toxicity	Not classified Based on available data, the classification criteria are not met
h) STOT-single exposure	Not classified Based on available data, the classification criteria are not met
i) STOT-repeated exposure	Not classified Based on available data, the classification criteria are not met
j) aspiration hazard	Not classified Based on available data, the classification criteria are not met

**Toxicological information of the main substances found in the product:**

titanium dioxide; Dioxotitanium	a) acute toxicity	LD50 Oral Rat > 10000 mg/kg
calcium oxide; quicklime	a) acute toxicity	LD50 Oral Rat = 500 mg/kg
xylenes; 1,2 dimethylbenzene	a) acute toxicity	LC50 Inhalation Rat = 47635 mg/l 4h LD50 Oral Rat = 4300 mg/kg LD50 Skin Rabbit > 4350 mg/kg LC50 Inhalation Rat = 29.08 mg/l 4h LD50 Oral Rat = 3500 mg/kg
ethyl benzene; aethylbenzol	a) acute toxicity	LD50 Skin Rabbit = 15354 mg/kg LC50 Inhalation Rat = 172 mg/l 4h LD50 Oral Rat = 3500 mg/kg LD50 Skin Rabbit = 15400 mg/kg LC50 Inhalation Rat = 17.4 mg/l 4h LD50 Oral Rat = 3500 mg/kg
bis(1,2,2,6,6- pentamethyl-4-piperidyl) sebacate; Decanedioic acid, bis(1,2,2,6,6- pentamethyl-4- piperidiny) ester	a) acute toxicity	LD50 Oral Rat = 2615 mg/kg

**Substance(s) listed on the IARC Monographs:**

titanium dioxide; Dioxotitanium      Group 2B  
xylenes; 1,2 dimethylbenzene      Group 3  
ethyl benzene; aethylbenzol      Group 2B

**Substance(s) listed as OSHA Carcinogen(s):**

titanium dioxide; Dioxotitanium  
ethyl benzene; aethylbenzol

**Substance(s) listed as NIOSH Carcinogen(s):**

titanium dioxide; Dioxotitanium

**Substance(s) listed on the NTP report on Carcinogens:**

None

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**12. ECOLOGICAL INFORMATION****Toxicity**

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

Eco-Toxicological Information:

**List of Eco-Toxicological properties of the product**

Not classified for environmental hazards

Based on available data, the classification criteria are not met

**List of components with eco-toxicological properties**

Component	Ident. Numb.	Ecotox Infos
calcium oxide; quicklime	CAS: 1305-78-8 - EINECS: 215-138-9	a) Aquatic acute toxicity : LC50 Fish Cyprinus carpio = 1070 mg/L 96h IUCLID
xylenes; 1,2 dimethylbenzene	CAS: 1330-20-7 - EINECS: 215-535-7 - INDEX: 601-022-00-9	a) Aquatic acute toxicity : LC50 Fish Cyprinus carpio = 780 mg/L 96h EPA  a) Aquatic acute toxicity : LC50 Fish Pimephales promelas = 13.4 mg/L 96h EPA  a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss 2.661 mg/L 96h EPA  a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss 13.5 mg/L 96h IUCLID  a) Aquatic acute toxicity : LC50 Fish Lepomis macrochirus 13.1 mg/L 96h EPA a) Aquatic acute toxicity : LC50 Fish Lepomis macrochirus = 19 mg/L 96h EPA a) Aquatic acute toxicity : LC50 Fish Lepomis macrochirus 7.711 mg/L 96h EPA  a) Aquatic acute toxicity : LC50 Fish Pimephales promelas 23.53 mg/L 96h EPA  a) Aquatic acute toxicity : LC50 Fish Cyprinus carpio > 780 mg/L 96h IUCLID a) Aquatic acute toxicity : LC50 Fish Poecilia reticulata 30.26 mg/L 96h EPA a) Aquatic acute toxicity : EC50 Daphnia water flea = 3.82 mg/L 48h a) Aquatic acute toxicity : LC50 Daphnia Gammarus lacustris = 0.6 mg/L 48h
ethyl benzene; aethylbenzol	CAS: 100-41-4 - EINECS: 202-849-4 - INDEX: 601-023-00-4	a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss 11 mg/L 96h EPA  a) Aquatic acute toxicity : LC50 Fish Lepomis macrochirus = 32 mg/L 96h EPA a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata > 438 mg/L 96h IUCLID  a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss = 4.2 mg/L 96h EPA

- a) Aquatic acute toxicity : LC50 Fish Pimephales promelas 7.55 mg/L 96h EPA
- a) Aquatic acute toxicity : LC50 Fish Pimephales promelas 9.1 mg/L 96h EPA
- a) Aquatic acute toxicity : LC50 Fish Poecilia reticulata = 9.6 mg/L 96h EPA
- a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna 1.8 mg/L 48h IUCLID
- a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata = 4.6 mg/L 72h IUCLID
- a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata 2.6 mg/L 72h EPA
- a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata 1.7 mg/L 96h EPA

bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate; Decanedioic acid, bis(1,2,2,6,6-pentamethyl-4-piperidinyl) ester

CAS: 41556-26-7 - EINECS: 255-437-1

a) Aquatic acute toxicity : LC50 Fish Lepomis macrochirus = 0.97 mg/L 96h

#### Persistence and degradability

Not available

#### Bioaccumulative potential

Not available

#### Mobility in soil

Not available

#### Other adverse effects

Not available

### 13. DISPOSAL CONSIDERATIONS

#### Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Recover if possible.

Methods of disposal:

Disposal of this product, solutions, packaging and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor.

Do not dispose of waste into sewers.

Disposal considerations:

Do not allow to enter drains or watercourses.

Dispose of product according to all federal, state and local applicable regulations.

If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned.

Dispose of containers contaminated by the product in accordance with local or national legal provisions. For further information, contact your local waste authority.

Special precautions:

This material and its container must be disposed of in a safe way. Care should be taken when handling untreated empty containers.

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Empty containers or liners may retain some product residues. Do not re-use empty containers.

### 14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

#### UN number

DOT-UN Number: Not Applicable

ADR-UN number: Not Applicable

IATA-Un number: Not Applicable

IMDG-Un number: Not Applicable

#### UN proper shipping name

DOT-Proper Shipping Name: Not Applicable

ADR-Shipping Name: Not Applicable

IATA-Technical name: Not Applicable

IMDG-Technical name: Not Applicable

#### Transport hazard class(es)

DOT-Hazard Class: Not Applicable

ADR-Class: Not Applicable



IATA-Class: Not Applicable

IMDG-Class: Not Applicable

**Packing group**

DOT-Packing group: Not Applicable

ADR-Packing Group: Not Applicable

IATA-Packing group: Not Applicable

IMDG-Packing group: Not Applicable

**Environmental hazards**

Marine pollutant: No

Environmental Pollutant: Not Applicable

DOT-RQ: Not Applicable

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not Applicable

**Special precautions**

Department of Transportation (DOT):

Not Applicable

Road and Rail (ADR-RID) :

Not Applicable

Air (IATA) :

Not Applicable

Sea (IMDG) :

Not Applicable

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**15. REGULATORY INFORMATION**

**USA - Federal regulations**

**TSCA - Toxic Substances Control Act**

**TSCA inventory:**

All the components are listed on the TSCA inventory

**TSCA listed substances:**

titanium dioxide; Dioxotitanium is listed in TSCA Section 8b

calcium oxide; quicklime is listed in TSCA Section 8b

xylenes; 1,2 dimethylbenzene is listed in TSCA Section 8b

ethyl benzene; aethylbenzol is listed in TSCA Section 8b

bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate; Decanedioic acid, bis(1,2,2,6,6-pentamethyl-4-piperidiny) ester is listed in TSCA Section 8b

**SARA - Superfund Amendments and Reauthorization Act**

**Section 302 - Extremely Hazardous Substances:**

No substances listed

**Section 304 - Hazardous substances:**

xylenes; 1,2 dimethylbenzene

ethyl benzene; aethylbenzol

**Section 313 - Toxic chemical list:**

xylenes; 1,2 dimethylbenzene

ethyl benzene; aethylbenzol

**CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act**

**Substance(s) listed under CERCLA:**

xylenes; 1,2 dimethylbenzene	Reportable quantity:	100	pounds
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ethyl benzene; aethylbenzol	Reportable quantity:	1000	pounds
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**CAA - Clean Air Act**

**CAA listed substances:**

xylenes; 1,2 dimethylbenzene	is listed in CAA	Section 112(b) - HAP	Section 112(b) - HON
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ethyl benzene; aethylbenzol	is listed in CAA	Section 112(b) - HAP	Section 112(b) - HON
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**CWA - Clean Water Act**

**CWA listed substances:**

xylenes; 1,2 dimethylbenzene	is listed in CWA	Section 311
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**USA - State specific regulations****California Proposition 65****Substance(s) listed under California Proposition 65:**

titanium dioxide; Dioxotitanium Listed as carcinogen  
ethyl benzene; aethylbenzol Listed as carcinogen

**Massachusetts Right to know****Substance(s) listed under Massachusetts Right to know:**

titanium dioxide; Dioxotitanium  
calcium oxide; quicklime  
xylenes; 1,2 dimethylbenzene  
ethyl benzene; aethylbenzol

**Pennsylvania Right to know****Substance(s) listed under Pennsylvania Right to know:**

titanium dioxide; Dioxotitanium  
calcium oxide; quicklime  
xylenes; 1,2 dimethylbenzene  
ethyl benzene; aethylbenzol

**New Jersey Right to know****Substance(s) listed under New Jersey Right to know:**

titanium dioxide; Dioxotitanium  
calcium oxide; quicklime  
xylenes; 1,2 dimethylbenzene  
ethyl benzene; aethylbenzol

**Canada - Federal regulations****DSL - Domestic Substances List****DSL (Domestic Substances List)**

All the substances are listed in the DSL.

**NDSL - Non Domestic Substances List****NDSL (Non Domestic Substances List)**

No substances listed

**NPRI - National Pollutant Release Inventory****NPRI (National Pollutant Release Inventory) - List of substances listed.**

No substances listed

**16. OTHER INFORMATION**

Safety Data Sheet dated: 4/20/2022 - version 8

**Additional classification information**

NFPA Health: 1 = Slight  
NFPA Flammability: 1 = Combustible if heated  
NFPA Reactivity: 0 = Minimal  
NFPA Special Risk: Not available



Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. The information herein is presented in good faith and believed to be accurate as of the effective date given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.

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

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.

Code	Description
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.

H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

**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.

**Paragraphs modified from the previous revision:**

- 9. PHYSICAL AND CHEMICAL PROPERTIES
- 10. STABILITY AND REACTIVITY
- 14. TRANSPORT INFORMATION