

Safety Data Sheet

MAPEFLOOR PATCH / B

Safety Data Sheet dated: 08/29/2024 - version 3

Date of first edition: 02/25/2021



1. Identification

Product identifier

Mixture identification:

Trade name: MAPEFLOOR PATCH / B

Trade code: 9016885

Recommended use and restrictions on use

Recommended use: Hardener for epoxy products

Restrictions on use: Not available

Supplier's details

Company: MAPEI INC. (Canada)

2900 Francis-Hughes Avenue

H7L 3J5 - Laval - QC - CAN

Phone: 1-450-662-1212

Responsible: RDProductSafety@mapei.com

Emergency phone number

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

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

2. Hazard identification



Classification of the product

Serious eye damage, Category 1

Causes serious eye damage.

Skin Sensitization, Category 1A

May cause an allergic skin reaction.

Skin corrosion, Category 1C

Causes severe skin burns and eye damage.

Label elements

Hazard pictograms and Signal Word



Danger

Hazard statements

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

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 skin thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

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P302+P352 IF ON SKIN: Wash with plenty of water.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.

3

P304+P340 IF INHALED: Remove person to fresh air and keep 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.

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P308+P313 IF exposed or concerned: Get medical advice/attention.

P310 Immediately call a doctor.

- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P362+P364 Take off contaminated clothing and wash it before reuse.
- P501 Dispose of contents/container in accordance with applicable regulations.

Other hazards

None

Ingredient(s) with unknown acute toxicity

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)

3. Composition/information on ingredients

Substances

Not Relevant

Mixtures

Hazardous components within the meaning of WHMIS 2015 and related classification:

List of components

Qty	Name	Ident. Numb.	Classification	Registration Number
25-50 %	fatty acids, tall-oil, polymers with bisphenol a, diethylenetriamine, epichlorohydrin and tetraethylenepentamine;	CAS:68951-85-9 EC:620-444-4	Skin Irrit. 2, H315; Eye Irrit. 2A, H319	
5-10 %	2,4,6-tris(dimethylaminomethyl)phenol	CAS:90-72-2 EC:202-013-9 Index:603-069-00-0	Skin Corr. 1C, H314; Eye Dam. 1, H318; Acute Tox. 4, H302	01-2119560597-27-XXXX
5-10 %	3-aminomethyl-3,5,5-trimethylcyclohexylamine	CAS:2855-13-2 EC:220-666-8 Index:612-067-00-9	Acute Tox. 4, H302; Skin Corr. 1B, H314; Eye Dam. 1, H318; Skin Sens. 1A, H317	01-2119514687-32-XXXX
5-10 %	polyoxypropylenediamine	CAS:9046-10-0 EC:618-561-0	Eye Dam. 1, H318; Skin Corr. 1C, H314; Aquatic Chronic 3, H412	01-2119557899-12-XXXX
5-10 %	benzyl alcohol	CAS:100-51-6 EC:202-859-9 Index:603-057-00-5	Acute Tox. 4, H302; Eye Irrit. 2A, H319	01-2119492630-38-XXXX
1-2.5 %	titanium dioxide	CAS:13463-67-7 EC:236-675-5 Index:022-006-00-2	Carc. 2, H351	01-2119489379-17-XXXX
1-2.5 %	tetraethylenepentamine; 3,6,9-triazaundecamethylenediamine	CAS:112-57-2 EC:203-986-2 Index:612-060-00-0	Skin Sens. 1, H317; Aquatic Chronic 2, H411; Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Corr. 1B, H314	
1-2.5 %	bis[(dimethylamino)methyl]phenol	CAS:71074-89-0 EC:275-162-0	Skin Corr. 1C, H314	

The actual concentration of the components listed above is withheld as a trade secret.

4. First-aid measures

Description of necessary first-aid measures

In case of skin contact:

- Immediately take off all contaminated clothing.
- OBTAIN IMMEDIATE MEDICAL ATTENTION.
- Remove contaminated clothing immediately and dispose of safely.
- After contact with skin, wash immediately with soap and plenty of water.
- If skin irritation or rash occurs: Get medical advice/attention.

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.

Remove contact lenses, if present and easy to do. Continue rinsing.

In case of Ingestion:

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

IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

In case of Inhalation:

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

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Most important symptoms/effects, acute and delayed

Eye irritation

Eye damages

Skin Irritation

Erythema

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).

Treatment:

(see paragraph 4.1)

5. Fire-fighting measures

Suitable and unsuitable extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO₂).

Unsuitable extinguishing media:

None in particular.

Specific hazards arising from the hazardous product

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

Hazardous combustion products: Not available

Explosive properties: Not available

Oxidizing properties: Not available

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.

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.

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.

Wash skin thoroughly after handling.

See also section 8 for recommended protective equipment.

Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:
Adequately ventilated premises.
Storage temperature: Not available

8. Exposure controls/personal protection

Control parameters

Community Occupational Exposure Limits (OEL)

	OEL Type	Country	Occupational Exposure Limit
benzyl alcohol CAS: 100-51-6	MAK	GERMANY	Long Term: 22 mg/m3 - 5 ppm
	MAK	SWITZERLAND	Long Term: 22 mg/m3 - 5 ppm
titanium dioxide CAS: 13463-67-7	ACGIH		Long Term: 10 mg/m3 A4 - LRT irr
	MAK	GERMANY	Long Term: 0.3 mg/m3
	OSHA		Long Term: 15 mg/m3
	ACGIH		Long Term: 10 mg/m3 A4 - Not Classifiable as a Human Carcinogen;lower respiratory tract irritation
	MAK	AUSTRIA	Long Term: 5 mg/m3; Short Term: 10 mg/m3
	MAK	SWITZERLAND	Long Term: 3 mg/m3

Predicted No Effect Concentration (PNEC) values

3-aminomethyl-3,5,5-trimethylcyclohexylamine CAS: 2855-13-2	Exposure Route: Fresh Water; PNEC Limit: 0.06 mg/l
	Exposure Route: Marine water; PNEC Limit: 0.006 mg/l
	Exposure Route: Intermittent release; PNEC Limit: 0.23 mg/l
	Exposure Route: Freshwater sediments; PNEC Limit: 5.784 mg/kg
	Exposure Route: Marine water sediments; PNEC Limit: 0.578 mg/kg
	Exposure Route: Soil; PNEC Limit: 1.121 mg/kg
titanium dioxide CAS: 13463-67-7	Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 3.18 mg/l
	Exposure Route: Fresh Water; PNEC Limit: 0.184 mg/l
	Exposure Route: Soil; PNEC Limit: 100 mg/kg
	Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 100 mg/l
	Exposure Route: Marine water; PNEC Limit: 0.0184 mg/l
	Exposure Route: Marine water sediments; PNEC Limit: 100 mg/kg
	Exposure Route: Freshwater sediments; PNEC Limit: 1000 mg/kg
	Exposure Route: Intermittent release; PNEC Limit: 0.193 mg/l

Derived No Effect Level (DNEL) values

2,4,6-tris(dimethylaminomethyl)phenol CAS: 90-72-2	Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
	Worker Industry: 0.31 mg/m3
3-aminomethyl-3,5,5-trimethylcyclohexylamine CAS: 2855-13-2	Exposure Route: Human Inhalation
	Worker Industry: 20.1 mg/m3
titanium dioxide CAS: 13463-67-7	Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
	Worker Industry: 0.17 mg/m3
	Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
	Consumer: 0.028 mg/m3

Appropriate engineering controls

Not available

Individual protection measures, such as 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:

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.

Use adequate protective respiratory equipment.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state: Liquid

Appearance and colour: paste Grey

Odour: ammonia

Odour threshold: No data available

pH: No data available

Melting point / freezing point: No data available

Initial boiling point and boiling range: No data available

Flash point: 94 °C (201 °F)

Evaporation rate: No data available

Upper/lower flammability or explosive limits: No data available

Vapour density: No data available

Vapour pressure: No data available

Relative density: 0.52 g/cm³

Solubility in water: partly soluble

Solubility in oil: partly soluble

Partition coefficient (n-octanol/water): No data available

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity: No data available

Kinematic viscosity: > 20,5 mm²/sec (40 °C) mm²/s

Explosive properties: No data available

Oxidizing properties: No data available

Solid/gas flammability: No data available

Other information

Substance Groups relevant properties No data available

Miscibility: No data available

Fat Solubility: No data available

Conductivity: No data available

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

None.

11. Toxicological information

Information on toxicological effects

Likely routes of exposure:

Skin contact, skin absorption, eye contact, inhalation and ingestion.

Toxicological Information of the Preparation

a) acute toxicity	Not classified Based on available data, the classification criteria are not met
b) skin corrosion/irritation	The product is classified: Skin corrosion, Category 1C(H314)
c) serious eye damage/irritation	The product is classified: Serious eye damage, Category 1(H318)
d) respiratory or skin sensitisation	The product is classified: Skin Sensitization, Category 1A(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 on main components of the mixture:

2,4,6-tris(dimethylaminomethyl)phenol	a) acute toxicity	LD50 Oral Rat = 2169 mg/kg LD50 Skin Rat > 1 ml/kg
3-aminomethyl-3,5,5-trimethylcyclohexylamine	a) acute toxicity	LC50 Inhalation Dust Rat > 5.01 mg/l 4h LD50 Oral Rat = 1030 mg/kg LD50 Skin Rat > 2000 mg/kg
polyoxypropylenediamine	a) acute toxicity	LD50 Oral Rat = 2885 mg/kg LD50 Skin Rabbit = 2980 mg/kg
benzyl alcohol	a) acute toxicity	LD50 Oral Rat = 1620 mg/kg
titanium dioxide	a) acute toxicity	LD50 Oral Rat > 5000 mg/kg LD50 Skin Rat > 2000 mg/m3 LC50 Inhalation Dust Rat > 6.82 mg/l 4h LD50 Skin Rabbit > 10000 mg/kg
tetraethylenepentamine; 3,6,9-triazaundecamethylenedia mine	a) acute toxicity	LD50 Skin Rabbit = 660 µL/kg LD50 Oral Rat = 2100 mg/kg LD50 Skin Rabbit = 660 µL/kg LD50 Oral Rat = 3990 mg/kg

Substance(s) listed on the IARC Monographs:

titanium dioxide	Group 2B
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Substance(s) listed as OSHA Carcinogen(s):

titanium dioxide

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

titanium dioxide

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

None

12. Ecological information**Ecotoxicity**

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

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 Eco-Toxicological properties of the components

Component	Ident. Numb.	Ecotox Data
2,4,6-tris(dimethylaminomethyl)phenol	CAS: 90-72-2 - EINECS: 202-013-9 - INDEX: 603-069-00-0	a) Aquatic acute toxicity : LC50 Fish = 175 mg/L 96h a) Aquatic acute toxicity : EC50 Algae = 46.7 mg/L 72h a) Aquatic acute toxicity : NOEC Algae = 25.1 mg/L 72h
3-aminomethyl-3,5,5-trimethylcyclohexylamine	CAS: 2855-13-2 - EINECS: 220-666-8 - INDEX: 612-067-00-9	a) Aquatic acute toxicity : LC50 Fish = 110 mg/L 96 a) Aquatic acute toxicity : EC50 Daphnia = 23 mg/L 48 a) Aquatic acute toxicity : EC50 Daphnia = 388 mg/L 48 a) Aquatic acute toxicity : EC50 Algae > 50 mg/L 72 b) Aquatic chronic toxicity : NOEC Daphnia = 3 mg/L - 21 d a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna 14.6 mg/L 48h EPA a) Aquatic acute toxicity : EC50 Algae Desmodesmus subspicatus = 37 mg/L 72h IUCLID
polyoxypropylenediamine	CAS: 9046-10-0 - EINECS: 618-561-0	a) Aquatic acute toxicity : LC50 Fish > 15 mg/L
benzyl alcohol	CAS: 100-51-6 - EINECS: 202-859-9 - INDEX: 603-057-00-5	a) Aquatic acute toxicity : LC50 Fish Pimephales promelas = 460 mg/L 96h EPA
titanium dioxide	CAS: 13463-67-7 - EINECS: 236-675-5 - INDEX: 022-006-00-2	a) Aquatic acute toxicity : LC50 Fish > 100 mg/L 96 a) Aquatic acute toxicity : EC50 Algae = 16 mg/L 72 a) Aquatic acute toxicity : NOEC Algae = 5600 mg/L 72 a) Aquatic acute toxicity : EC50 Daphnia > 100 mg/L 48
tetraethylenepentamine; 3,6,9-triazaundecamethylenediamine	CAS: 112-57-2 - EINECS: 203-986-2 - INDEX: 612-060-00-0	a) Aquatic acute toxicity : LC50 Fish Poecilia reticulata = 420 mg/L 96h IUCLID a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna = 24.1 mg/L 48h IUCLID a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata = 2.1 mg/L 72h IUCLID

Persistence and degradability

N.A.

Bioaccumulative potential

N.A.

Mobility in soil

N.A.

Other adverse effects

N.A.

13. Disposal considerations

Safe handling and methods for disposal

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

UN number

TDG-UN number: UN1760

ADR-UN number: 1760

DOT-UN Number: UN1760

IATA-Un number: 1760

IMDG-Un number: 1760

UN proper shipping name

TDG-Shipping Name: CORROSIVE LIQUID, N.O.S. (trisdimethylaminomethylphenol - bisdimethylaminomethylphenol)

ADR-Shipping Name: CORROSIVE LIQUID, N.O.S. (trisdimethylaminomethylphenol - bisdimethylaminomethylphenol)

DOT-Proper Shipping Name: Corrosive liquids, n.o.s. (trisdimethylaminomethylphenol - bisdimethylaminomethylphenol)

IATA-Technical name: CORROSIVE LIQUID, N.O.S. (trisdimethylaminomethylphenol - bisdimethylaminomethylphenol)

IMDG-Technical name: CORROSIVE LIQUID, N.O.S. (trisdimethylaminomethylphenol - bisdimethylaminomethylphenol)

Transport hazard class(es)

TDG-Class: 8

ADR-Class: 8

DOT-Hazard Class: 8

IATA-Class: 8

IMDG-Class: 8

Packing group

TDG-Packing Group: III

ADR-Packing Group: III

DOT Packing Group: III

IATA-Packing group: III

IMDG-Packing group: III

Environmental hazards

Marine pollutant: No

Environmental Pollutant: Not Applicable

DOT-RQ: No

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)

Not Applicable

Special precautions in connection with transport or conveyance

TDG:

TDG Special provisions: 16

Department of Transportation (DOT):

DOT-Special Provision(s): IB3, T7, TP1, TP28

DOT-Label(s): 8

DOT-Symbol: N/A

DOT-Cargo Aircraft: N/A

DOT-Passenger Aircraft: N/A

DOT-Bulk: N/A

DOT-Non-Bulk: N/A

DOT-Limited Quantity threshold: 5 L

Road and Rail (ADR-RID):

ADR-Label: 8

ADR-Hazard identification number: 80

ADR-Transport category (Tunnel restriction code): 3 (E)

Air (IATA):

IATA-Passenger Aircraft: 852

IATA-Cargo Aircraft: 856

IATA-Label: 8

IATA-Subsidiary hazards: -

IATA-Erg: 8L

IATA-Special Provisions: A3 A803

Sea (IMDG):

IMDG-Stowage Code: Category A SW2

IMDG-Stowage Note: -

IMDG-Subsidiary hazards: -

IMDG-Special Provisions: 223 274

IMDG-EMS: F-A, S-B

15. Regulatory information

Canada - Federal regulations

DSL - Domestic Substances List

All the substances are listed in the DSL.

NDSL - Non Domestic Substances List

This product complies with NDSL inventory

NPRI - National Pollutant Release Inventory

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

No substances listed

USA - Federal regulations

TSCA - Toxic Substances Control Act

All the components are listed on the TSCA inventory

TSCA listed substances:

fatty acids, tall-oil, polymers with
bisphenol a, diethylenetriamine,
epichlorohydrin and
tetraethylenepentamine;

2,4,6-
tris(dimethylaminomethyl)phenol

3-aminomethyl-3,5,5-
trimethylcyclohexylamine

polyoxypropylenediamine

benzyl alcohol

titanium dioxide

tetraethylenepentamine; 3,6,9-
triazaundecamethylenediamine

SARA - Superfund Amendments and Reauthorization Act

Section 302 - Extremely Hazardous Substances:

No substances listed

Section 304 - Hazardous substances:

No substances listed

Section 313 - Toxic chemical list:

No substances listed

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

Substance(s) listed under CERCLA:

No substances listed

CAA - Clean Air Act

CAA listed substances:

benzyl alcohol	is listed in CAA	Section 112(b) - HON
tetraethylenepentamine; 3,6,9-triazaundecamethylenediamine	is listed in CAA	Section 112(b) - HON

CWA - Clean Water Act

CWA listed substances:

No substances listed

USA - State specific regulations

California Proposition 65

Substance(s) listed under California Proposition 65:

titanium dioxide	Listed as carcinogen
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Massachusetts Right to know

Substance(s) listed under Massachusetts Right to know:

benzyl alcohol
titanium dioxide
tetraethylenepentamine; 3,6,9-triazaundecamethylenediamine

Pennsylvania Right to know

Substance(s) listed under Pennsylvania Right to know:

benzyl alcohol
titanium dioxide
tetraethylenepentamine; 3,6,9-triazaundecamethylenediamine

New Jersey Right to know

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

3-aminomethyl-3,5,5-trimethylcyclohexylamine
titanium dioxide
tetraethylenepentamine; 3,6,9-triazaundecamethylenediamine

16. Other information

Safety Data Sheet dated: 8/29/2024 - version 3

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
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H351	Suspected of causing cancer.

H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Code	Hazard class and hazard category	Description
A.1/4/Dermal	Acute Tox. 4	Acute toxicity (dermal), Category 4
A.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
A.2/1B	Skin Corr. 1B	Skin corrosion, Category 1B
A.2/1C	Skin Corr. 1C	Skin corrosion, Category 1C
A.2/2	Skin Irrit. 2	Skin irritation, Category 2
A.3/1	Eye Dam. 1	Serious eye damage, Category 1
A.3/2A	Eye Irrit. 2A	Eye irritation, Category 2A
A.4.2/1	Skin Sens. 1	Skin Sensitization, Category 1
A.4.2/1A	Skin Sens. 1A	Skin Sensitization, Category 1A
A.6/2	Carc. 2	Carcinogenicity, Category 2
CAN-HAE/C2	Aquatic Chronic 2	Chronic (long-term) aquatic hazard - Category 2
CAN-HAE/C3	Aquatic Chronic 3	Chronic (long-term) aquatic hazard - Category 3

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:

- 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING
- 2. HAZARDS IDENTIFICATION
- 3. COMPOSITION/INFORMATION ON INGREDIENTS
- 5. FIRE-FIGHTING MEASURES
- 7. HANDLING AND STORAGE
- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 9. PHYSICAL AND CHEMICAL PROPERTIES
- 11. TOXICOLOGICAL INFORMATION
- 12. ECOLOGICAL INFORMATION
- 14. TRANSPORT INFORMATION
- 15. REGULATORY INFORMATION
- 16. OTHER INFORMATION