Safety Data Sheet
PLANIBOND AE PART B
Safety Data Sheet dated: 06/16/2022 - version 8
Date of first edition: 06/22/2015

1. IDENTIFICATION

Product identifier

Mixture identification:

Trade name: PLANIBOND AE PART B

Trade code: 9019616

Recommended use of the chemical and restrictions on use

Recommended use: Hardener for epoxy products

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

Skin corrosion, Category 1B	Causes severe skin burns and eye damage.
Serious eye damage, Category 1	Causes serious eye damage.
Skin Sensitization, Category 1A	May cause an allergic skin reaction.
Reproductive toxicity, Category 1B	May damage fertility or the unborn child if inhaled, in contact with skin and if swallowed.
Acute aquatic hazard, category 2	Toxic to aquatic life.
Chronic (long term) aquatic hazard, category 2	Toxic to aquatic life with long lasting effects.

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.
H318	Causes serious eye damage.
H360	May damage fertility or the unborn child if inhaled, in contact with skin and if swallowed.
H401	Toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

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 vapours.
P264	Wash skin thoroughly after handling.
P272	Contaminated work clothing must not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
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.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P310	Immediately call a doctor.
P321	Specific treatment (see supplementary instructions on this label).
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
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 crystalline silica (quartz sand). IARC has classified crystalline silica as a Group 1 carcinogen. Both IARC and NTP consider silica as a known human carcinogen. Evidence is based on the chronic and long-term exposure workers have had to respirable sized crystalline silica dust particles. 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 silica dust hazard)

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 29 CFR 1910.1200 and related classification:

List of components

Concentration (% w/w)	Name	Ident. Numb.	Classification	Registration Number
10-20 %	polyamido amine; Fatty acids, tall-oil, reaction products with tetraethylenepentamine	CAS:68953-36-6 EC:273-201-6	Skin Corr. 1C, H314; Eye Dam. 1, H318; Skin Sens. 1, H317	
2.5-5 %	4-nonylphenol, branched; Isononylphenol	CAS:84852-15-3 EC:284-325-5 Index:601-053-00-8	Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Skin Corr. 1B, H314; Eye Dam. 1, H318; Repr. 2, H361	
2.5-5 %	aminoethylpiperazine; 2-piperazin-1-ylethylamine	CAS:140-31-8 EC:205-411-0 Index:612-105-00-4	Acute Tox. 3, H311; Skin Corr. 1B, H314; Skin Sens. 1, H317; Eye Dam. 1, H318; Repr. 1B, H360	
1-2.5 %	benzyl alcohol; benzenemethanol	CAS:100-51-6 EC:202-859-9 Index:603-057-00-5	Acute Tox. 4, H302; Acute Tox. 4, H332; Eye Irrit. 2A, H319	
1-2.5 %	triethylene tetramine; trientine	CAS:112-24-3 EC:203-950-6 Index:612-059-00-5	Skin Sens. 1, H317; Aquatic Chronic 3, H412; Acute Tox. 4, H312; Acute Tox. 4, H302; Skin Corr. 1B, H314	
1-2.5 %	2,4,6-tri(dimethylaminomethyl)phenol; Mesitol, alpha2,alpha4,alpha6-tris(dimethylamino)-	CAS:90-72-2 EC:202-013-9 Index:603-069-00-0	Skin Corr. 1B, H314; Skin Sens. 1A, H317; Aquatic Chronic 3, H412	
1-2.5 %	titanium dioxide; Dioxotitanium	CAS:13463-67-7 EC:236-675-5 Index:022-006-00-2	Carc. 2, H351	

0.49-1 %	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
0.25-0.49 %	silica sand; quartz	CAS:14808-60-7 EC:238-878-4	STOT RE 1, H372; Carc. 1A, H350

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 opthalmologist 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

Skin Irritation

Erythema

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_2).

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 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.

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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

List of components with OEL value

	OEL Type	Country	Long Term mg/m3	Long Term ppm	Short Term mg/m3	Short Term ppm	Note
benzyl alcohol; benzenemethanol CAS: 100-51-6	MAK	GERMANY	22	5			
	MAK	SWITZERLAND	22	5			
titanium dioxide; Dioxotitanium CAS: 13463-67-7	OSHA		15				
	ACGIH		10				A4 - Not Classifiable as a Human Carcinogen;lower respiratory tract irritation;
	MAK	GERMANY	0.3				
	MAK	AUSTRIA	5		10		
	MAK	SWITZERLAND	3				
silica sand; quartz CAS: 14808-60-7	ACGIH		0.025				A2 - Suspected Human Carcinogen;lung cancer;pulmonary fibrosis;
	MAK	AUSTRIA	0.15				
	MAK	SWITZERLAND	0.15				

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 >=0,5mm; breakthrough time >=480min.

Nitrile rubber - NBR: thickness >=0,35mm; breakthrough time >=480min.

Butyl rubber - IIR: thickness >=0,5mm; breakthrough time >=480min.

Fluorinated rubber - FKM: thickness >=0,4mm; breakthrough time >=480min.

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 white
Odour: Pungent
Odour threshold: No data available
pH: 11.00
Melting point / freezing point: No data available
Initial boiling point and boiling range: 100 °C (212 °F)
Flash point: 100 °C (212 °F) (Closed Cup)
Evaporation rate: No data available
Upper/lower flammability or explosive limits: No data available
Vapour density: No data available
Vapour pressure: 0.10 (kPa 50›C) hPa (0 mmHg)
Relative density: 1.84 g/cm3
Solubility in water: partly soluble
Solubility in oil: No data available
Partition coefficient (n-octanol/water): No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Viscosity: No data available
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

Toxicological information of the product:

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 1B(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	The product is classified: Reproductive toxicity, Category 1B(H360)
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:

4-nonylphenol, branched; Isononylphenol	a) acute toxicity	LD50 Oral Rat 1300 mg/kg
		LD50 Skin Rabbit > 2000 mg/kg
		LD50 Skin Rabbit = 2000 mg/kg
		LD50 Oral Rat = 1300 mg/kg
aminoethylpiperazine; 2-piperazin-1-ylethylamine	a) acute toxicity	LD50 Skin Rabbit = 880 µL/kg
		LD50 Oral Rat = 2140 mg/kg
		LD50 Oral Rat = 2140 µL/kg
		LD50 Skin Rabbit = 880 µL/kg
benzyl alcohol; benzenemethanol	a) acute toxicity	LD50 Skin Rabbit = 2000 mg/kg
		LC50 Inhalation Rat = 8.8 mg/l 4h
		LD50 Oral Rat = 1230 mg/kg
		LD50 Skin Rabbit = 2 g/kg
		LD50 Oral Rat = 1230 mg/kg
triethylene tetramine; trientine	a) acute toxicity	LD50 Skin Rabbit = 550 mg/kg
		LD50 Oral Rat = 2500 mg/kg
		LD50 Skin Rabbit = 550 mg/kg
		LD50 Oral Rat = 2500 mg/kg
2,4,6-tri(dimethylaminomethyl) phenol; Mesitol, alpha2,alpha4,alpha6-tris(dimethylamino)-	a) acute toxicity	LD50 Skin Rat = 1280 mg/kg
		LD50 Oral Rat = 1000 mg/kg
		LD50 Skin Rat = 1280 mg/kg
		LD50 Oral Rat = 1200 mg/kg
titanium dioxide; Dioxotitanium	a) acute toxicity	LD50 Oral Rat > 10000 mg/kg
tetraethylenepentamine; 3,6,9-triazaundecamethylenediamine	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
silica sand; quartz	a) acute toxicity	LD50 Oral Rat = 500 mg/kg

Substance(s) listed on the IARC Monographs:

titanium dioxide; Dioxotitanium	Group 2B
silica sand; quartz	Group 1

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

titanium dioxide; Dioxotitanium

silica sand; quartz

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

titanium dioxide; Dioxotitanium

silica sand; quartz

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

silica sand; quartz

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

The product is classified: Acute aquatic hazard, category 2(H401), Chronic (long term) aquatic hazard, category 2(H411)

List of components with eco-toxicological properties

Component	Ident. Numb.	Ecotox Infos
4-nonylphenol, branched; Isononylphenol	CAS: 84852-15-3 - EINECS: 284-325-5 - INDEX: 601-053-00-8	LC50 Fish Pimephales promelas 0.135 mg/L 96h ,,Holcombe, G.W., Phipps, G.L., Knuth, M.L. and Felhaber, T. (1984) Environ. Pollut. (Series A) 35, 367-381 LC100 Fish Leuciscus idus 1.1 mg/L 48h ,,Huels study, 1988 (unpublished) LC50 Fish Leuciscus idus 0.95 mg/L 48h ,,Huels study, 1988 (unpublished) LOEC Fish Pimephales promelas 14 µg/L 33d ,,Chemical Manufacturers Association (1991) Two environmental effects 4-Nonylphenol final reports 1. Chronic toxicity of Nonylphenol to the Mysid, Mysidopsis bahia: EnviroSystems Study Number 8977-CMA 2. Early life stage toxicity of Nonylphenol to the fath NOEC Fish Pimephales promelas 7.4 µg/L 33d ,,Chemical Manufacturers Association (1991) Two environmental effects 4-Nonylphenol final reports 1. Chronic toxicity of Nonylphenol to the Mysid, Mysidopsis bahia: EnviroSystems Study Number 8977-CMA 2. Early life stage toxicity of Nonylphenol to the fath EC100 Daphnia Daphnia magna > 400 µg/L 48h ,,Huels report No. DK-522, 1992 (unpublished) EC0 Daphnia Daphnia magna < 100 µg/L 48h ,,Huels report No. DK-522, 1992 (unpublished) EC50 Daphnia Daphnia magna 140 µg/L 48h ,,Huels report No. DK-522, 1992 (unpublished) LOEC Daphnia Daphnia magna > 100 µg/L 21d ,,Huels report No. DL-143, 1992 (unpublished) NOEC Daphnia Daphnia magna 0.024 mg/L 21d ICI PLC (1991) Nonyl Phenol: Chronic Toxicity to Daphnia Magna Report No: BLS1319/B (Interim) BL4176/B (Final) EC90 Algae Scenedesmus subspicatus (Desmodesmus subspicatus) 3.2 mg/L 72h Huels study (unpublished) EC10 Algae Scenedesmus subspicatus (Desmodesmus subspicatus) 0.5 mg/L 72h Huels study (unpublished) EC50 Algae Scenedesmus subspicatus (Desmodesmus subspicatus) 1.3 mg/L 72h Huels study (unpublished) a) Aquatic acute toxicity : LC50 Fish Pimephales promelas = 0.135 mg/L 96h IUCLID a) Aquatic acute toxicity : LC50 Fish Lepomis macrochirus = 0.1351 mg/L 96h

		EPA	
		a) Aquatic acute toxicity :	EC50 Daphnia Daphnia magna = 0.14 mg/L 48h IUCLID
		a) Aquatic acute toxicity :	EC50 Algae Pseudokirchneriella subcapitata 0.36 mg/L 96h EPA
		a) Aquatic acute toxicity :	EC50 Algae Pseudokirchneriella subcapitata 0.16 mg/L 72h EPA
		a) Aquatic acute toxicity :	EC50 Algae Desmodesmus subspicatus = 1.3 mg/L 72h IUCLID
aminoethylpiperazine; 2-piperazin-1-ylethylamine	CAS: 140-31-8 - EINECS: 205-411-0 - INDEX: 612-105-00-4	a) Aquatic acute toxicity :	LC50 Fish Pimephales promelas 1950 mg/L 96h EPA
		a) Aquatic acute toxicity :	LC50 Fish Poecilia reticulata > 1000 mg/L 96h IUCLID
		a) Aquatic acute toxicity :	LC50 Fish Oncorhynchus mykiss >= 100 mg/L 96h IUCLID
		a) Aquatic acute toxicity :	EC50 Daphnia Daphnia magna = 32 mg/L 48h IUCLID
		a) Aquatic acute toxicity :	EC50 Algae Pseudokirchneriella subcapitata = 495 mg/L 72h IUCLID
benzyl alcohol; benzenemethanol	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
		a) Aquatic acute toxicity :	LC50 Fish Lepomis macrochirus = 10 mg/L 96h EPA
		a) Aquatic acute toxicity :	EC50 Daphnia water flea = 23 mg/L 48h
triethylene tetramine; trientine	CAS: 112-24-3 - EINECS: 203-950-6 - INDEX: 612-059-00-5	a) Aquatic acute toxicity :	LC50 Fish Poecilia reticulata = 570 mg/L 96h IUCLID
		a) Aquatic acute toxicity :	LC50 Fish Pimephales promelas = 495 mg/L 96h IUCLID
		a) Aquatic acute toxicity :	EC50 Algae Desmodesmus subspicatus = 2.5 mg/L 72h IUCLID
		a) Aquatic acute toxicity :	EC50 Algae Pseudokirchneriella subcapitata = 20 mg/L 72h IUCLID
		a) Aquatic acute toxicity :	EC50 Algae Pseudokirchneriella subcapitata = 3.7 mg/L 96h EPA
		a) Aquatic acute toxicity :	EC50 Daphnia Daphnia magna = 31.1 mg/L 48h IUCLID
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
silica sand; quartz	CAS: 14808-60-7 - EINECS: 238-878-4	a) Aquatic acute toxicity :	LC50 carp > 10000 mg/L 72h

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

UN number

DOT-UN Number: UN3082

ADR-UN number: 3082

IATA-Un number: 3082

IMDG-Un number: 3082

UN proper shipping name

DOT-Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (4-nonylphenol, branched; Isononylphenol)

ADR-Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (4-nonylphenol, branched; Isononylphenol)

IATA-Technical name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (4-nonylphenol, branched; Isononylphenol)

IMDG-Technical name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (4-nonylphenol, branched; Isononylphenol)

Transport hazard class(es)

DOT-Hazard Class: 9

ADR-Class: 9

IATA-Class: 9

IMDG-Class: 9

Packing group

DOT-Packing group: III

ADR-Packing Group: III

IATA-Packing group: III

IMDG-Packing group: III

Environmental hazards

Marine pollutant: Yes

Environmental Pollutant: Not Applicable

DOT-RQ: No

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

Not Applicable

Special precautions

Department of Transportation (DOT):

DOT-Special Provision(s): 8, 146, 173, 335, IB3, T4, TP1, TP29

DOT-Label(s): 9

DOT-Symbol: N/A

DOT-Cargo Aircraft: N/A

DOT-Passenger Aircraft: N/A

DOT-Bulk: N/A

DOT-Non-Bulk: N/A

Road and Rail (ADR-RID) :

ADR-Label: 9

ADR-Hazard identification number: 90

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

Air (IATA) :

IATA-Passenger Aircraft: 964

IATA-Cargo Aircraft: 964

IATA-Label: 9

IATA-Subsidiary hazards: -

IATA-Erg: 9L

IATA-Special Provisioning: A97 A158 A197

Sea (IMDG) :

IMDG-Stowage Code: Category A

IMDG-Stowage Note: -

IMDG-Subsidiary hazards: -

IMDG-Special Provisioning: 274 335 969

IMDG-Page: N/A

IMDG-Label: N/A

IMDG-EMS: F-A, S-F

IMDG-MFAG: N/A

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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:

polyamido amine; Fatty acids, tall-oil, reaction products with tetraethylenepentamine	is listed in TSCA	Section 8b
4-nonylphenol, branched; Isononylphenol	is listed in TSCA	Section 8b Section 8a - PAIR Section 5a - SNUR Section 12b
aminoethylpiperazine; 2-piperazin-1-ylethylamine	is listed in TSCA	Section 8b
benzyl alcohol; benzenemethanol	is listed in TSCA	Section 8b
triethylene tetramine; trientine	is listed in TSCA	Section 8b
2,4,6-tri(dimethylaminomethyl)phenol; Mesitol, alpha2,alpha4,alpha6-tris(dimethylamino)-	is listed in TSCA	Section 8b
titanium dioxide; Dioxotitanium	is listed in TSCA	Section 8b
tetraethylenepentamine; 3,6,9-triazaundecamethylenediamine	is listed in TSCA	Section 8b
silica sand; quartz	is listed in TSCA	Section 8b

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:

4-nonylphenol, branched; Isononylphenol

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; benzenemethanol	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; Dioxotitanium	Listed as carcinogen
silica sand; quartz	Listed as carcinogen

Massachusetts Right to know

Substance(s) listed under Massachusetts Right to know:

aminoethylpiperazine; 2-piperazin-1-ylethylamine

benzyl alcohol; benzenemethanol

triethylene tetramine; trientine

titanium dioxide; Dioxotitanium

tetraethylenepentamine; 3,6,9-triazaundecamethylenediamine

silica sand; quartz

Pennsylvania Right to know

Substance(s) listed under Pennsylvania Right to know:

aminoethylpiperazine; 2-piperazin-1-ylethylamine

benzyl alcohol; benzenemethanol

triethylene tetramine; trientine

titanium dioxide; Dioxotitanium

tetraethylenepentamine; 3,6,9-triazaundecamethylenediamine

silica sand; quartz

New Jersey Right to know

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

aminoethylpiperazine; 2-piperazin-1-ylethylamine

triethylene tetramine; trientine

titanium dioxide; Dioxotitanium

tetraethylenepentamine; 3,6,9-triazaundecamethylenediamine

silica sand; quartz

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: 6/16/2022 - version 8

Additional classification information

NFPA Health: 3 = Serious

NFPA Flammability: 1 = Combustible if heated

NFPA Reactivity: 0 = Minimal

NFPA Special Risk: NONE

NFPA Special Risk: NONE

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.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H350	May cause cancer.
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.
H361	Suspected of damaging fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
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.1/3/Dermal	Acute Tox. 3	Acute toxicity (dermal), Category 3
A.1/4/Dermal	Acute Tox. 4	Acute toxicity (dermal), Category 4
A.1/4/Inhal	Acute Tox. 4	Acute toxicity (inhalation), 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.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.6/1A	Carc. 1A	Carcinogenicity, Category 1A
A.6/2	Carc. 2	Carcinogenicity, Category 2
A.7/1B	Repr. 1B	Reproductive toxicity, Category 1B
A.7/2	Repr. 2	Reproductive toxicity, Category 2
A.9/1	STOT RE 1	Specific target organ toxicity following repeated exposure, Category 1
US-HAE/A1	Aquatic Acute 1	Acute aquatic hazard, category 1
US-HAE/C1	Aquatic Chronic 1	Chronic (long term) aquatic hazard, category 1
US-HAE/C2	Aquatic Chronic 2	Chronic (long term) aquatic hazard, category 2
US-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
- 16. OTHER INFORMATION