

Safety Data Sheet**ULTRABOND TURF PU 1K**

Safety Data Sheet dated: 8/12/2016 - version 3

Date of first edition: 5/12/2015

1. IDENTIFICATION**Product identifier**

Mixture identification:

Trade name: ULTRABOND TURF PU 1K

Recommended use of the chemical and restrictions on use

Recommended use: Urethane turf adhesive

Restrictions on use: N.A.

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

Emergency 24 hour numbers:

(USA) CHEMTREC 1-800-424-9300

(Canada) CANUTEC 1-613-996-6666

2. HAZARD(S) IDENTIFICATION**Classification of the chemical**

Skin Irrit. 2	Causes skin irritation.
Eye Irrit. 2A	Causes serious eye irritation.
Resp. Sens. 1	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens. 1	May cause an allergic skin reaction.
Carc. 2	Suspected of causing cancer if inhaled and in contact with skin.
STOT RE 2	May cause damage to organs through prolonged or repeated exposure if inhaled and in contact with skin.

Label elements**Symbols:**

Danger

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

Code	Description
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260.1	Do not breathe mist/vapours/spray.
P264.2	Wash skin thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280.B	Wear protective gloves and eye/face protection.
P284	[In case of inadequate ventilation] wear respiratory protection.
P302+P352.A	IF ON SKIN: Wash with plenty of 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.
P314	Get medical advice/attention if you feel unwell.
P321.A	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.A	If experiencing respiratory symptoms: Call a POISON CENTER.
P362+P364	Take off contaminated clothing and wash it before reuse.
P405	Store locked up.
P501.A	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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

N.A.

Mixtures

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

List of components

Quantity	Name	Ident. Numb.	Classification
5-10 %	4,4' -Methylenediphenyl diisocyanate	CAS:101-68-8	Acute Tox. 4, H332; Eye Irrit. 2A, H319; STOT SE 3, H335; Skin Irrit. 2, H315; Resp. Sens. 1, H334; Skin Sens. 1, H317; STOT RE 2, H351
5-10 %	Methylenediphenyl diisocyanate (MDI)	CAS:26447-40-5	Carc. 2, H351; STOT RE 2, H373; Eye Irrit. 2A, H319; STOT SE 3, H335; Skin Irrit. 2, H315; Resp. Sens. 1, H334; Skin Sens. 1, H317; Acute Tox. 4, H332
2.5-5 %	Soybean oil, methyl ester	CAS:67784-80-9	Skin Irrit. 2, H315; Eye Irrit. 2B, H320
1-2.5 %	2,2-Dimorpholinodiethylether	CAS:6425-39-4	Eye Irrit. 2B, H320
0.49-1 %	4-Methylbenzenesulfonyl isocyanate	CAS:4083-64-1	Eye Irrit. 2A, H319; STOT SE 3, H335; Skin Irrit. 2, H315; Resp. Sens. 1, H334
0.1-0.25 %	4,4'-(1,2-ethanediy)bis-Morpholine	CAS:1723-94-0	Skin Irrit. 2, H315; Eye Irrit. 2B, H320; Skin Sens. 1, H317

4. FIRST AID MEASURES

Description of first aid measures

In case of skin contact:

- Immediately take off all contaminated clothing.
- 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:

- If breathing is irregular or stopped, administer artificial respiration.
- In case of inhalation, consult a doctor immediately and show him packing or label.

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).

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.A.

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.

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.

Methods and material for containment and cleaning up

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

Wash with plenty of water.

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.

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

Storage temperature: N.A.

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

Component	OEL Type	Country	Ceiling	Long Term mg/m3	Long Term ppm	Short Term mg/m3	Short Term ppm	Behaviour	Note
4,4' -Methylenediphenyl diisocyanate	ACGIH				0,005				respiratory sensitization (listed under Methylene bisphenyl isocyanate (MDI));
	OSHA		C			0,2	0,02		
Methylenediphenyl diisocyanate (MDI)	OSHA		C			0,2	0,02		

Appropriate engineering controls: N.A.

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:

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

Respiratory protection:

Use adequate protective respiratory equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state: Liquid
Appearance and colour: Paste whitish
Odour: odourless
Odour threshold: N.A.
pH: N.A.
Melting point / freezing point: N.A.
Initial boiling point and boiling range: N.A.
Flash point: >100 °C (212 °F)
Evaporation rate: N.A.
Upper/lower flammability or explosive limits: N.A.
Vapour density: N.A.
Vapour pressure: N.A.
Relative density: 1.04 g/cm³
Solubility in water: Insoluble
Solubility in oil: N.A.
Partition coefficient (n-octanol/water): N.A.
Auto-ignition temperature: N.A.
Decomposition temperature: N.A.
Viscosity: N.A.
Explosive properties: N.A.
Oxidizing properties: N.A.
Solid/gas flammability: N.A.

Other information

Substance groups relevant properties: N.A.
Miscibility: N.A.
Fat Solubility: N.A.
Conductivity: N.A.

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 mixture:

There is no toxicological data available on the mixture. Consider the individual concentration of each component to assess toxicological effects resulting from exposure to the mixture.

Toxicological information on main components of the mixture:

Methylenediphenyl diisocyanate (MDI)	a) acute toxicity	LD50 Skin Rabbit > 6200mg/kg LC50 Inhalation Rat = 369mg/l 4h LD50 Oral Rat > 7400mg/kg
4,4' -Methylenediphenyl diisocyanate	a) acute toxicity	LC50 Inhalation Rat = 369mg/m ³ 4h
4-Methylbenzenesulfonyl isocyanate	a) acute toxicity	LC50 Inhalation Rat > 640ppm 1h

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

Substance(s) listed on the IARC Monographs:

Methylenediphenyl diisocyanate (MDI) Group 3
4,4' -Methylenediphenyl diisocyanate Group 3

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

None

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

None

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

None

12. ECOLOGICAL INFORMATION

Toxicity

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
5-10 %	Methylenediphenyl diisocyanate (MDI)	CAS: 26447-40-5	LC50 d) Terrestrial toxicity Worm Eisenia foetida> 1000mg/kg 14d IUCLID NOEC d) Terrestrial toxicity Worm Eisenia foetida>= 1000mg/kg 14d IUCLID

Persistence and degradability

N.A.

Bioaccumulative potential

N.A.

Mobility in soil

N.A.

Other adverse effects

N.A.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste must be handled in accordance with all federal, state, provincial, and local regulations. Consult authorities before disposal.

14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

UN number

ADR-UN number: N.A.
DOT-UN Number: N.A.
IATA-Un number: N.A.
IMDG-Un number: N.A.

UN proper shipping name

ADR-Shipping Name: N.A.
DOT-Proper Shipping Name: N.A.
IATA-Technical name: N.A.
IMDG-Technical name: N.A.

Transport hazard class(es)

ADR-Class: N.A.
DOT-Hazard Class: N.A.
IATA-Class: N.A.
IMDG-Class: N.A.

Packing group

ADR-Packing Group: N.A.
DOT-Packing group: N.A.
IATA-Packing group: N.A.
IMDG-Packing group: N.A.

Environmental hazards

Marine pollutant: No
Environmental Pollutant: N.A.

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

Special precautions

Department of Transportation (DOT):
N.A.
Road and Rail (ADR-RID):
N.A.
Air (IATA):
N.A.
Sea (IMDG):
N.A.

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:

4,4' -Methylenediphenyl diisocyanate	is listed in TSCA	Section 8b, Section 8a - PAIR
Methylenediphenyl diisocyanate (MDI)	is listed in TSCA	Section 8b, Section 8a - PAIR
Soybean oil, methyl ester	is listed in TSCA	Section 8b
2,2-Dimorpholinodiethylether	is listed in TSCA	Section 8b
4-Methylbenzenesulfonyl isocyanate	is listed in TSCA	Section 8b
4,4'-(1,2-ethanediy)bis-Morpholine	is listed in TSCA	Section 8b

SARA - Superfund Amendments and Reauthorization Act

Section 302 - Extremely Hazardous Substances:

no substances listed

Section 304 - Hazardous substances:

4,4' -Methylenediphenyl diisocyanate

Section 313 - Toxic chemical list:

4,4' -Methylenediphenyl diisocyanate

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

Substance(s) listed under CERCLA:

4,4' -Methylenediphenyl diisocyanate Reportable quantity: 5000 pounds

CAA - Clean Air Act

CAA listed substances:

4,4' -Methylenediphenyl diisocyanate is listed in CAA Section 112(b) - HAP, 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:

no substances listed

Massachusetts Right to know

Substance(s) listed under Massachusetts Right to know:

4,4' -Methylenediphenyl diisocyanate
Methylenediphenyl diisocyanate (MDI)

Pennsylvania Right to know

Substance(s) listed under Pennsylvania Right to know:

4,4' -Methylenediphenyl diisocyanate

New Jersey Right to know

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

4,4' -Methylenediphenyl diisocyanate
Methylenediphenyl diisocyanate (MDI)

Canada- Federal regulations

DSL - Domestic Substances List

DSL Inventory:

All the substances are listed in the DSL.

NDSL - Non Domestic Substances List

NDSL Inventory:

List of substances included in the NDSL: 4,4'-(1,2-ethanediyl)bis-Morpholine

cas: 1723-94-0

NPRI - National Pollutant Release Inventory

Substances listed in NPRI:

no substances listed

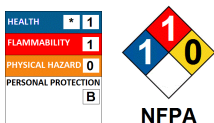
16. OTHER INFORMATION

Code	Description
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H320	Causes 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.D	Suspected of causing cancer if inhaled and in contact with skin.
H373	May cause damage to organs through prolonged or repeated exposure .
H373.D	May cause damage to organs through prolonged or repeated exposure if inhaled and in contact with skin.

Safety Data Sheet dated: 8/12/2016 - version 3

Product code: 2923

Additional classification information



HMIS Health: 1 = Slight
HMIS Health - Is health hazard chronic?: Yes
HMIS Flammability: 1 = Combustible if heated
HMIS Reactivity: 0 = Minimal

HMIS P.P.E.: Safety glasses, gloves

NFPA Health: 1 = Slight

NFPA Flammability: 1 = Combustible if heated

NFPA Reactivity: 0 = Minimal

NFPA Special Risk: N.A.

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.

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
- 3. COMPOSITION/INFORMATION ON INGREDIENTS
- 9. PHYSICAL AND CHEMICAL PROPERTIES
- 15. REGULATORY INFORMATION