

IDENTIFICATION

Product identifier

Mixture identification:

Trade name: SYNLAWN ADHESIVE

Trade code: 9023331

Recommended use of the chemical and restrictions on use

Recommended use: Polyurethane-based adhesive

Restrictions on use: N.A.

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

Company: Synthetic Turf Resources Corp

2680 Abutment Road,

Dalton, GA 30721

866-268-6100



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, in contact with skin and if swallowed.
STOT RE 2	May cause damage to organs through prolonged or repeated exposure if inhaled.

Label Elements

Pictograms and Signal Words



DANGER!

HAZARD STATEMENTS

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

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.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	[In case of inadequate ventilation] wear respiratory protection.
P302+P352	IF ON SKIN: Wash with plenty of water.

PRECAUTIONARY STATEMENTS (CONT.)

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.
P321	Specific treatment (see supplementary instructions on this label)
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER.
P362+P364	Take off contaminated clothing and wash it 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

HAZARD STATEMENTS

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COMPOSITION/INFORMATION ON INGREDIENTS

Substances

N.A.

Mixtures

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

LIST OF COMPONENTS

Concentration (% w/w)	Name	Ident. Numb.	Classification
10-20%	DIPHENYLMETHANE-2,4-DIISOCYANATE	CAS:5873-54-1	Eye Irrit. 2A, H319; Skin Irrit. 2, H315; STOT SE 3, H335; Resp. Sens. 1, H334; Acute Tox. 4, H332; STOT RE 2, H373; Skin Sens. 1, H317
5-10%	4,4'-METHYLENEDIPHENYL DIISOCYANATE	CAS:101-68-8	Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335; STOT RE 2, H373; Carc. 2, H351; Resp. Sens. 1, H334; Skin Sens. 1, H317
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 %	2,2-METHYLENEDIPHENYL DIISOCYANATE	CAS:2536-05-2	STOT RE 2, H373; Eye Irrit. 2A, H319; STOT SE 3, H335; Skin Irrit. 2, H315; Acute Tox. 4, H332; Resp. Sens. 1, H334; Skin Sens. 1, H317

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

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).

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.



Adhesive For Artificial Grass

MAP1K-GL-AC-TUBE
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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.
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.

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 EXPOSURE CONTROLS/PERSONAL PROTECTION for recommended protective equipment.

Conditions for safe storage, including any incompatibilities

Storage temperature: N.A.
Keep away from food, drink and feed.
Incompatible materials:
None in particular.
Instructions as regards storage premises:
Adequately ventilated premises.

EXPOSURE CONTROLS/PERSONAL PROTECTION

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	Note
DIPHENYLMETHANE-2,4-DIISOCYANATE	MAK	AUSTRIA		0,05	0,005	0,1	0,01	
4,4'-METHYLENEDIPHENYL DIISOCYANATE	ACGIH				0,005			respiratory sensitization (listed under Methylene bisphenyl isocyanate (MDI));
	OSHA		C			0,2	0,02	
	MAK	GERMANY		0,05				
	ACGIH				0,005			respiratory sensitization (listed under Methylene bisphenyl isocyanate (MDI));
	MAK	AUSTRIA		0,05	0,005	0,1	0,01	
2,2-METHYLENEDIPHENYL DIISOCYANATE	MAK			0,05	0,005	0,1	0,01	

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

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.

INDIVIDUAL PROTECTION MEASURES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	Vapour Pressure	No Data Available
Appearance & Colour	Paste Green	Relative Density	1.04 g/cm ³
Odour	Faint	Solubility in Water	No Data Available
Odour Threshold:	No Data Available	Solubility in Oil	No Data Available
pH	7.00	Partition Coefficient (n-octanol/water)	No Data Available
Melting Point / Freezing Point	No Data Available	Auto-ignition Temperature	No Data Available
Initial Boiling Point and Boiling Range	No Data Available	Decomposition Temperature	No Data Available
Flash Point	94 °C (201 °F)	Viscosity	No Data Available
Evaporation Rate	No Data Available	Explosive Properties	No Data Available
Upper/Lower Flammability or Explosive Limits	No Data Available	Oxidizing Properties	No Data Available
Vapour Density	No Data Available	Solid/gas Flammability	No Data Available

OTHER INFORMATION

Miscibility	No Data Available
Fat Solubility	No Data Available
Conductivity	No Data Available

Substance Groups relevant properties no data available

STABILITY AND REACTIVITY

REGULATORY INFORMATION

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

TOXICOLOGICAL INFORMATION

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 OF THE MIXTURE

4,4'- METHYLENEDIPHENYL DIISOCYANATE	a) acute toxicity	LC50 Inhalation Rat = 369 mg/m ³ 4h
		LD50 Oral Rat = 31600 mg/kg
2,2 - DIMORPHOLINODIETHYLE THER	a) acute toxicity	LD50 Oral Rat 300 mg/kg
4 - METHYLBENZENESULFON YL ISOCYANATE	a) acute toxicity	LC50 Inhalation Rat > 640 ppm 1h
		LD50 Oral Rat = 2234 mg/kg

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
- Toxicological kinetics, metabolism and distribution information
- i) STOT-repeated exposure
- j) aspiration hazard

Substance(s) listed on the IARC Monographs

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

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

Component	Ident. Numb.	Ecotox Infos
2,2-DIMORPHOLINODIETHYLETHER	CAS: 6425-39-4	a) Aquatic acute toxicity : LC50 Fish Danio rerio > 2150 mg/L 96h ECHA

Persistence and degradability: N/A

Bioaccumulative potential: N/A

Mobility in soil: N/A

Other adverse effects: N/A



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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.



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.
IMDG-Packing group: N.A.

REGULATORY INFORMATION

USA - Federal regulations

TSCA - Toxic Substances Control Act

TSCA inventory: All the components are listed on the TSCA inventory

TSCA LISTED SUBSTANCES

DIPHENYLMETHANE-2,4 - DIISOCYANATE	is listed in TSCA Section 8b Section 8a - PAIR
4,4'- METHYLENEDIPHENYL DIISOCYANATE	is listed in TSCA Section 8b Section 8a - PAIR
2,2 - DIMORPHOLINODIETHYLETHER	is listed in TSCA Section 8b
4 - METHYLBENZENESULFONYL ISOCYANATE	is listed in TSCA Section 8b
2,2 - METHYLENEDIPHENYL DIISOCYANATE	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 DIISOCYANATE

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

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

CANADA - FEDERAL REGULATIONS

DSL - Domestic Substances List

DSL Inventory: All the substances are listed in the DSL.

NDSL - Non Domestic Substances List

NDSL Inventory: No substances listed.

NPRI - National Pollutant Release Inventory

Substances listed in NPRI: No substances listed.

OTHER INFORMATION

Safety Data Sheet dated: 6/16/2021 - version 7

Additional classification information

NFPA Health: 1 = Slight
NFPA Flammability: 1 = Combustible if heated
NFPA Reactivity: 1 = Slight
NFPA Special Risk: N.A.



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

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.