FieldTurf®
A Tarkett Sports Company

THE ULTIMATE
SURFACE EXPERIENCE

FieldTurf XM6

Pile Weight

- 35 oz/yd²

Total Carpet Weight

- 58 oz/yd²

Infill Weight

- 1080 oz/yd² (7.5 lbs/ft²)

Total Product Weight

- 1138 oz/yd²

Property	Value	Units	ASTM
Code	FieldTurf XM6-65		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Ridged Monofilament		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	280	Microns	D3218
Tape Thickness - Colors	235	Microns	D3218
Pile Height	2.5	inches	D5823
Pile Weight	35	oz/yd²	D5848
Primary Backing Weight	7+	oz/yd²	D5848
Secondary Backing Weight	16+	oz/yd²	D5848
Total Carpet Weight	58+	oz/yd²	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	G-Max	F1936
Water Permeability	>40	inch/hour	DIN 18-035
SBR Rubber Infill	3.5	lbs/ft²	n/a
Silica Sand Infill	4	lbs/ft²	n/a
Total Infill Weight	7.5	lbs/ft²	n/a
Total Product Weight	1138	oz/yd²	n/a

Variation of +/- 5% on properties listed above is within normal manufacturing tolerances.

Issue Date 9/8/14

XM6

Best in Class.

1 Monofilament Fiber

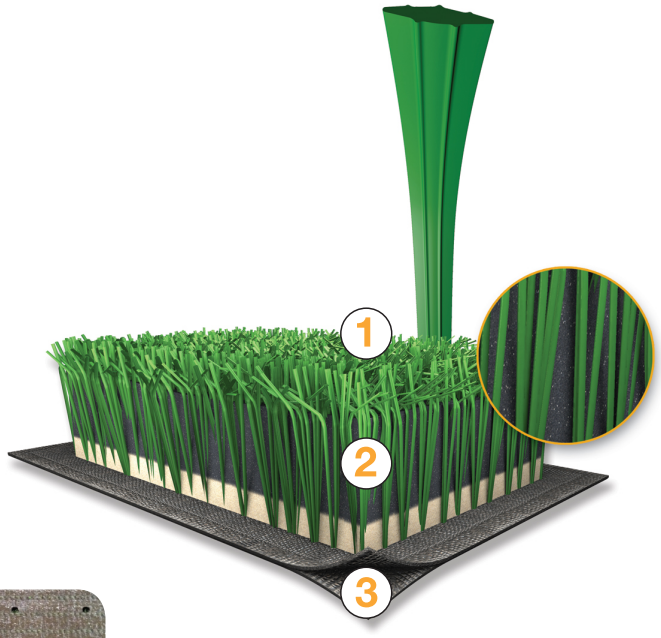
FieldTurf XM6 was developed with strict adherence to the 3 pillars of fiber development - Polymer, Process, and Geometry (PPG). The result is an exceptionally resilient and soft fiber that has been designed to provide excellent long-term durability.

2 Two-Layered Infill

FieldTurf XM6 features a two-layer infill comprised of ballast layers of sand and top layers of recycled rubber granules for proper shock absorption and world-class performance.

3 Turf Backing

FieldTurf XM6 features a dimensionally-stable backing that is coated and perforated at FieldTurf's manufacturing facility. The result is an exceptional tuft bind strength along with excellent drainage characteristics.



Contact your representative for product samples and color swatches.

TESTING SERVICES, INC.
817 SHOWALTER AVE. • P.O. BOX 2041
DALTON, GEORGIA 30722-2041
PHONE: (706) 226-1400 • FAX: (706) 226-6118

Prepared for:

FieldTurf
A Tarkett Sports Company
THE ULTIMATE SURFACE EXPERIENCE

REPORT NUMBER:	57168
LAB TEST NUMBER:	2508-5444
DATE:	January 25, 2013

Test Material:

Turf Identification
XM6-65

Test Scope: A synthetic turf sample was submitted for a battery of testing to analyze construction and physical properties.

	Test Method	Test Description	Test Result	
PRODUCT TESTING	ASTM D5848-10	Total Product Weight	58.30 oz/yd²	
	ASTM D5848-10	Pile Yarn Fiber Weight	35.91 oz/yd²	
	ASTM D5848-10	Primary Backing Weight	7.00 oz/yd²	
	ASTM D5848-10	Secondary Backing Weight	15.39 oz/yd²	
	ASTM D5823-05a	Average Pile Height	2.50”	
	ASTM D1335-11	Average Tuft Bind Strength	10.5 lbs/force	
	ASTM D5034-09	Average Grab Tear Strength	MD: 261.8 lbs/force	CMD: 275.4 lbs/force
	ASTM D5793-05	Binding Sites	Stitch Per Inch: 3.66	Gauge: 3/4”

	Test Method	Test Description	Test Result
*PERFORMANCE TESTING	ASTM F355-10a	Gmax	100
	ASTM D2859-06(2011)	Pill Flammability	Passes
	ASTM F1551-09; DIN 18-035	Water Permeability	149.9 inches per hour

*All Performance Testing was conducted with the specified infill per client’s request.

Individual Testing Reports are available upon request, which provide the detailed test results and specific procedures.

Approved By:

_____

Erle Miles, Jr VP
Testing Services Inc

FieldTurf
A Tarkett Sports Company

THE ULTIMATE
SURFACE EXPERIENCE

8088 Montview Road
Montreal, QC H4P 2L7
Phone: 514-340-9311
Fax: 514-340-9374

Date of Revision: 01/01/2010

Revision No. 1

Material Safety Data Sheet

Product Name:	**SAND**

SECTION 1 - IDENTIFICATION OF THE SUBSTANCE AND COMPANY

1.1. Identification of the substance:

Chemical name: Silica

Product name & synonyms: Silica Sand, Glass Sand, Flint, Sand, Quartz, Crystalline Silica, Foundary Sand, Play Sand, Frac Sand, Filtration Sand, Bunker Sand, Turf Sand, #20-40 Sand

Formula: SiO_2

Material Uses: Industries such as gas & oil, water filtration, artificial athletic fields, cement, non-skid surfaces, fillers, golf course sand

1.2. Company:

Main Office:
8088 Montview Road
Montreal, QC H4P 2L7
Telephone: 514-340-9311
Fax: 514-340-9374

U.S. Office:
175 N. Industrial Blvd.
Calhoun, GA 30701
Telephone: 706-625-6533
Fax: 706-625-6534

SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	% by Weight	CAS #	Exposure Limits
Crystalline silica quartz	90.0 – 99.9	14808-60-7	OSHA PEL: 30 mg/m^3 / (% silica + 2) (total) 10 mg/m^3 / (% silica + 2) (respirable) ACGIH TLV: 0.025 mg/m^3 (respirable)

This material is classified as hazardous under OSHA regulations.

WARNING: Never Use This Material for Sand Blasting

SECTION 3 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: A white or tan sand, or ground sand. It is not flammable, combustible or explosive. Do not breathe this material. Crystalline silica (quartz) is not known to be an environmental hazard. Crystalline silica (quartz) is incompatible with hydrofluoric acid, fluorine, chlorine trifluoride or oxygen difluoride.

POTENTIAL HEALTH EFFECTS

EYE Contact can cause moderate to severe irritation of eyes, including discomfort or pain, local redness and swelling of the conjuctiva.

SKIN Contact can cause dryness or moderate irritation of skin.

INGESTION None known.

INHALATION If inhaled as dust, this product can cause irritation of the respiratory system resulting in coughing and/or sneezing. Higher exposures may cause a build-up of fluid in the lungs with severe shortness of breath. Inhalation of silica can also cause a chronic irreversible lung disorder, silicosis. Some medical reports state inhalation of silica dust for prolonged periods may cause lung cancer.

Per ACGIH, adverse effects are not likely to occur in the workplace provided exposure levels do not exceed the appropriate TLVs/PELs. See Section 8. However, because of the wide variation in individual susceptibility, lower exposure limits may be appropriate for some individuals including persons with pre-existing medical conditions.

CHRONIC EFFECTS / CARCINOGENICITY: Silicosis, cancer, scleroderma, tuberculosis, nephrotoxicity and arthritis are potential chronic effects. See Section 11 for further information regarding these conditions

SIGNS AND SYMPTOMS OF EXPOSURE: There are generally no signs or symptoms of exposure to crystalline silica (quartz). Often, chronic silicosis has no symptoms. The symptoms of chronic silicosis, if present, are shortness of breath, wheezing, cough and sputum production. The symptoms of acute silicosis are the same; additionally, weight loss and fever are associated with acute silicosis. The symptoms of scleroderma include thickening and stiffness of the skin, particularly in the fingers, shortness of breath, difficulty swallowing and joint problems.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: The condition of individuals with lung disease (e.g., bronchitis, emphysema, chronic obstructive pulmonary disease) can be aggravated by exposure. See Section 11 for additional detail on potential adverse health effects.

POTENTIAL ENVIRONMENTAL EFFECTS: None known.

SECTION 4 – FIRST AID MEASURES

EYE Quickly and gently blot or brush away sand. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for at least 15 minutes or until the sand is removed, while holding the eyelid(s) open. Occasionally lift eyelid(s) to ensure thorough rinsing. Beyond flushing, do not attempt to remove material from eye(s). Do not rub eyes. Seek medical attention immediately.

SKIN Wash with soap and water. Seek medical attention if irritation persists.

INGESTION Never give anything by mouth if the victim is rapidly losing consciousness, or is unconscious or convulsing. Have victim rinse mouth thoroughly with water. If irritation or discomfort occurs, obtain medical advice immediately.

INHALATION Remove source of contamination or move victim to fresh air. Seek medical attention if necessary. If breathing has stopped, give artificial respiration.

Product Name:	SAND (continued)

SECTION 5 – FIRE FIGHTING MEASURES

Flammable Properties

Flash Point: Not flammable Method: N/A

EXTINGUISHING MEDIA	None required. Use suitable extinguishing media for surrounding fire.
FIRE & EXPLOSION HAZARDS	None
FIRE FIGHTING INSTRUCTIONS	None

SECTION 6 – ACCIDENTAL RELEASE MEASURES

SPILL /LEAK PROCEDURES Use dustless methods (vacuum) and place in closable container for disposal or flush with water. Do not dry sweep. Use proper protective equipment indicated in Section 8.

SECTION 7 – HANDLING AND STORAGE

HANDLING Keep in tightly closed containers. Protect containers from physical damage. Avoid direct skin contact with the material.

Silica sand material contains fine dust. If you breathe this dust you can suffer severe, irreversible lung damage and death. Some medical reports state inhalation of silica dust may cause lung cancer. Medical reports also link breathing silica dust to crippling arthritis and skin and eye irritation. See Section 11 for further information.

You must never use this material without having a government-approved respirator. The work area must also be thoroughly ventilated by the use of forced air ventilation during and after use of this material.

If dusty, use protective goggles. An eye wash station should be readily available where this product is used.

Prior to use or handling, you are advised to review and thoroughly understand all health precautions outlined in the Material Safety Data Sheet (MSDS).

STORAGE Store in a cool, dry, and well-ventilated location. Do not store near incompatible materials. (See Section 10 for list of incompatible materials.) Avoid breakage of bagged materials or spills of bulk material.

Product Name:	SAND (continued)

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS

Use sufficient local exhaust to reduce the level of respirable crystalline silica to below the PEL. See ACGIH "Industrial Ventilation, A Manual of Recommended Practice" (latest edition).

RESPIRATORY PROTECTION

Use NIOSH/MSHA approved respirators if airborne concentration exceeds PEL. It is a violation of federal safety laws (OSHA) for employers to require workers to use this material without full respiratory protection. The federal laws that apply are: 29CFR 1910.134; 29CFR 1910.1000; 29CFR 1910.94.

The following chart specifies the types of respirators that may provide respiratory protection for crystalline silica.

Particulate Concentration	MINIMUM RESPIRATORY PROTECTION*
10 x PEL or less	Any particulate respirator, except single -use or quarter-mask respirator. Any fume respirator or high efficiency particulate filter respirator. Any supplied-air respirator. Any self-contained breathing apparatus.
50 x PEL or less	A high efficiency particulate filter respirator with a full facepiece. Any supplied-air respirator with a full facepiece, helmet, or hood. Any self-contained breathing apparatus with a full facepiece.
500 x PEL or less	A powered air-purifying respirator with a high efficiency particulate filter. A Type C supplied-air respirator operated in pressure-demand or other positive pressure or continuous-flow mode.
Greater than 500 x PEL or entry and escape from unknown concentrations	A type C, supplied-air respirator with a full facepiece, hood, or helmet, operated in a positive pressure mode (see 29 CFR 1910.94(a)(iii)). Also see 30 CFR Part 11.

*Use only NIOSH-approved or MSHA-approved equipment. See 29 CFR §1910.134 and 42 CFR §84.

See also ANSI standard Z88.2 (latest revision) "American National Standard for Respiratory Protection"

SKIN PROTECTION

Use appropriate gloves to prevent skin contact. Clothing should fully cover arms and legs and be tight fitting at the cuffs, neck and ankles to prevent dust from contacting the body. Clothing should be regularly washed to prevent dust accumulation.

EYE PROTECTION

Use safety goggles.

EXPOSURE GUIDELINES	OSHA PEL	ACGIH TLV
Crystalline silica (respirable)	10 mg/m^3 ÷ (% silica in the dust plus 2)	0.025 mg/m^3

Crystalline silica exists in several forms, the most common of which is quartz. If crystalline silica (quartz) is heated to more than 870°C it can change to a form of crystalline silica known as trydimite, and if crystalline silica (quartz) is heated to more than 1470°C, it can change to a form of crystalline silica known as cristobalite. Crystalline silica as trydimite and cristobalite are more fibrogenic than crystalline silica as quartz. The OSHA PEL for crystalline silica as trydimite and cristobalite is one-half the PEL for crystalline silica (quartz); the ACGIH TLV for crystalline silica as trydimite and cristobalite is one-half the TLV for crystalline silica as quartz.

Product Name:	SAND (continued)

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	White or tan sand; granular, crushed, or ground
ODOR	Odorless
BOILING POINT	4046°F
MELTING POINT	3110°F
VAPOR PRESSURE	N/A
SOLUBILITY IN WATER	Insoluble
SPECIFIC GRAVITY	2.65
pH	N/Ap

SECTION 10 – STABILITY AND REACTIVITY

STABILITY	Chemically stable.
MATERIALS TO AVOID	Contact with powerful oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, oxygen difluoride, may cause fires and/or explosions.
CONDITIONS TO AVOID	None
HAZARDOUS DECOMPOSITION PRODUCTS	Silica will dissolve in hydrofluoric acid and produce a corrosive gas – silicon tetrafluoride.

SECTION 11 – TOXICOLOGICAL INFORMATION

No LD_{50} or LC_{50} have been identified for this product.

SILICOSIS
The major concern is silicosis, caused by the inhalation and retention of respirable crystalline silica dust. Silicosis can exist in several forms, chronic (or ordinary), accelerated, or acute.

Chronic or Ordinary Silicosis is the most common form of silicosis, and can occur after many years of exposure to relatively low levels of airborne respirable crystalline silica dust. It is further defined as either simple or complicated silicosis.

> Simple silicosis is characterized by lung lesions (shown as radiographic opacities) less than 1 centimeter in diameter, primarily in the upper lung zones. Often, simple silicosis is not associated with symptoms, detectable changes in lung function or disability. Simple silicosis may be progressive and may develop into complicated silicosis or progressive massive fibrosis (PMF).
>
> Complicated silicosis or PMF is characterized by lung lesions (shown as radiographic opacities) greater than 1 centimeter in diameter. Although there may be no symptoms associated with complicated silicosis or PMF, the symptoms, if present, are shortness of breath, wheezing, cough and sputum production. Complicated silicosis or PMF may be associated with decreased lung function and may be disabling. Advanced complicated silicosis or PMF may lead to death. Advanced complicated silicosis or PMF can result in heart disease secondary to the lung disease (cor pumonale).

Accelerated Silicosis can occur with exposure to high concentrations of respirable crystalline silica over a relatively short period; the lung lesions can appear within five (5) years of the initial exposure. The progression can be rapid. Accelerated silicosis is similar to chronic or ordinary silicosis, except that the lung lesions appear earlier and the progression is more rapid.

Acute Silicosis can occur with exposures to very high concentrations of respirable crystalline silica over a very short time period, sometimes as short as a few months. The symptoms of acute silicosis include progressive shortness of breath, fever, cough and weight loss. Acute silicosis is fatal.

CANCER
IARC - The International Agency for Research on Cancer ("IARC") concluded that there was "*sufficient evidence* in humans for the carcinogenicity of crystalline silica in the forms of quartz or cristobalite from occupational sources", and that there is "*sufficient evidence* in experimental animals for the carcinogenicity of quartz and cristobalite." The overall IARC evaluation was that "crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is *carcinogenic to humans*

(Group 1)." The IARC evaluation noted that "carcinogenicity was not detected in all industrial circumstances studies. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." For further information on the IARC evaluation, see IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Volume 68, "Silica, Some Silicates..." (1997). (Emphasis added)

NTP - The National Toxicology Program, in its Sixth Annual Report on Carcinogens, concluded that "silica, crystalline (respirable)" may reasonably be anticipated to be a carcinogen, based on sufficient evidence in experimental animals and limited evidence in humans.

OSHA - Crystalline silica (quartz) is not regulated by the U. S. Occupational Safety and Health Administration as a carcinogen.

There is substantial literature on the issues of the carcinogenicity of crystalline silica, which the reader should consult for additional information. A summary of the literature is set forth in "Exposure to crystalline silica and risk of lung cancer; the epidemiological evidence", Thorax, Volume 51, pp. 97-102 (1996). The official statement of the American Thoracic Society on the issue of silica carcinogenicity was published in "Adverse Effects of Crystalline Silica Exposure", American Journal of Respiratory and Critical Care Medicine, Volume 155, pp. 761-765 (1997). The official statement concluded that "The available data support the conclusion that silicosis produces increased risk for bronchogenic carcinoma. The cancer risk may also be increased by smoking and other carcinogens in the workplace. Epidemiologic studies provide convincing evidence for increased cancer risk among tobacco smokers with silicosis. Less information is available for never-smokers and for workers exposed to silica but who do not have silicosis. For workers with silicosis, the risks for lung cancer are relatively high and consistent among various countries and investigators. Silicosis should be considered a condition that predisposes workers to an increased risk of lung cancer." Id. at 763.

SCLERODERMA
There is evidence that exposure to respirable crystalline silica or that the disease silicosis is associated with the increased incidence of scleroderma, an immune system disorder manifested by a fibrosis (scarring) of the lungs, skin and other internal organs. Recently, the American Thoracic Society noted that "there is persuasive evidence relating scleroderma to occupational silica exposures in setting where there is appreciable silicosis risk." The following may be consulted for additional information on silica, silicosis and scleroderma (also known as progressive systemic sclerosis): Occupational Lung Disorders, Third Edition, Chapter 12, entitled "Silicosis and Related Diseases", Parkes, W. Raymond (1994). "Adverse Effects of Crystalline Silica Exposure", American Journal of Respiratory and Critical Care Medicine, Volume 155, pp. 761-765 (1997).

TUBERCULOSIS
Individuals with silicosis are at increased risk to develop tuberculosis, if exposed to persons with tuberculosis. The following may be consulted for further information: Occupational Lung Disorders, Third Edition, Chapter 12, entitled "Silicosis and Related Diseases", Parkes, W. Raymond (1994). "Adverse Effects of Crystalline Silica Exposure", American Journal of Respiratory and Critical Care Medicine, Volume 155, pp. 761-765 (1997). Silica Sand (Brady, Colorado Springs, Riverside, Bakersfield)

NEPHROTOXICITY
There are several recent studies suggesting that exposure to respirable crystalline silica or that the disease silicosis is associated with the increased incidence of kidney disorders. The following may be consulted for additional information on silica, silicosis and nephrotoxicity: Occupational Lung Disorders, Third Edition, Chapter 12, entitled "Silicosis and Related Diseases", Parkes, W. Raymond (1994). "Further evidence of human silica nephrotoxicity in occupationally exposed workers", British Journal of Industrial Medicine, Vol. 50, No. 10, pp. 907-912 (1993). "Adverse Effects of Crystalline Silica Exposure", American Journal of Respiratory and Critical Care Medicine, Volume 155, pp. 761-765 (1997).

ARTHRITIS
There are recent studies suggesting that exposure to respirable crystalline silica or that the disease silicosis is associated with the increased incidence of arthritis. The following may be consulted for additional information on silica exposure and arthritis: American Journal of Industrial Medicine, Volume 35, pp. 375-381 "Connective Tissue Disease and Silicosis", Rosenman KD; Moore-Fuller M.; Reilly MJ. (1999). Environmental Health Perspective, Volume 107, pp. 793-802 "Occupational Exposure to Crystalline Silica and Autoimmune Disease", Parks CG; Conrad K; Cooper GS. (1999).

Product Name:	SAND (continued)

SECTION 12 – ECOLOGICAL INFORMATION

ECOTOXICITY: Crystalline silica (quartz) is not known to be ecotoxic; i.e., no data suggests that crystalline silica (quartz) is toxic to birds, fish, invertebrates, microorganisms or plants.

ENVIRONMENTAL FATE: This material shows no bioaccumulation effect or food chain concentration toxicity.

SECTION 13 – DISPOSAL CONSIDERATIONS

Dispose of in accordance with all applicable federal, state, and local environmental regulations. The material may be landfilled; however, used material may contain materials derived from other sources that because of contamination may not be disposed of in landfills. Disposed material should be covered to minimize generation of airborne dust.

RCRA: Crystalline silica (quartz) is not classified as a hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR §261 et seq. However, the material may be contaminated during use, and it is the responsibility of the user to assess the appropriate disposal of the used material.

SECTION 14 – TRANSPORT INFORMATION

US DOT	Not regulated
Proper Shipping Name	NA
Class	NA
UN Number	NA
Packing Group	NA

SECTION 15 – REGULATORY INFORMATION

United States

EPA

RCRA Hazardous Waste Number: not listed (40 CFR 261.33)
RCRA Hazardous Waste Classification (40 CFR 261): not classified
CERCLA Hazardous Substance (40 CFR 302.4) unlisted specific per RCRA, Sec. 3001; CWA, Sec. 311(b)(4); CWA, Sec. 307(a), CAA, Sec. 112
CERCLA Reportable Quantity (RQ): not listed.
SARA 311/312 Codes: not listed.
SARA Toxic Chemical (40 CFR 372.65): not listed.
SARA EHS (Extremely Hazardous Substance) (40 CFR 355): Not listed, Threshold Planning Quantity (TPQ): not listed.
TSCA: All chemical ingredients are listed on the U.S. TSCA Inventory List.
FDA: Silica is included in the list of substances that may be included in coatings used in food contact surfaces, 21 CFR §175.300(b)(3)(xxvi).
California Proposition 65: Respirable crystalline silica (quartz) is classified as a substance known to the state of California to be a carcinogen.

OSHA/MSHA Regulations

Air contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): 5 mg/m^3 TWA-8
MSHA: not listed.
OSHA Specifically Regulated Substance (29CFR 1910): not listed.

SECTION 16 – OTHER INFORMATION

HMIS: Health Risks 0*, Flammability 0, Reactivity 0, Personal Protection, E

NFPA: Health Hazard 0, Fire Hazard 0, Reactivity 0

Cryogenic Rubber

Recovery Technologies (Canada) Inc.
1225 Franklin Blvd. Cambridge, Ontario, N1R 7E5 Canada
Phone: (519) 740-6801 Fax: (519) 740-6811

MATERIAL SAFETY DATA SHEET

January 22, 2002

SECTION I - PRODUCT INFORMATION

MANUFACTURER'S NAME **Recovery Technologies (Canada) Inc.**	EMERGENCY TELEPHONE **519-740-6801**
ADDRESS **1225 Franklin Blvd., Cambridge, ON N1R 7E5**	Product Name **Reclaprene™ CTR**
CHEMICAL NAME AND SYNONYMS **Styrene-Butadiene Rubber**	
CHEMICAL FAMILY **Polymeric**	Appearance **Black and white granular powder**

SECTION 11 - HAZARDOUS INGREDIENTS

	%	TLV		%	TLV
Vulcanized Rubber-SBR: (9003-31-0)	45-50		COATINGS		
Carbon Black (01333 - 86-4)	25-30	N/A	BASE METAL		N/A
Process Oil (64742-04-7)	10-15	N/A	ALLOYS		N/A
Zinc Oxide (01314-13-2)	1-5	N/A	METALLIC COATINGS		N/A
Sulfur(07704-34-9)	1-5	N/A	FILLER METAL PLUS		N/A
Stearic Acid (00057-11-4)	1-5				N/A
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES — % — TLV

NONE

SECTION 111 - PHYSICAL DATA

BOILING POINT (oF)	N/A	SPECIFIC GRAVITY		.95 to 1.40	
VAPOR PRESSURE	N/A	PERCENT, VOLATILE BY VOLUME			N/A
VAPOR DENSITY	N/A	EVAPORATION RATE			N/A
SOLUBILITY IN WATER	very slight				
ODOR	Slight smell of vulanized rubber				

SECTION 1V - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT N/A	FLAMMABLE LIMITS N/A
EXTINGUISHING MEDIA Water-Protein, foam-dry chemical extinguisher(Do not use high pressure water)	
SPECIAL FIRE FIGHTING PROCEDURES	Smoke from burning rubber is Hazardous to Health Use self-contained breathing apparatus
UNUSUAL FIRE AND EXPLOSION HAZARDS	None

Recovery Technologies (Canada) Inc.

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

N/A

EFFECTS OF OVEREXPOSURE

N/A

EMERGENCY AND FIRST AID PROCEDURES

If contact causes allergic reaction, wash thoroughly.
If irritation persists, see a physician.

SECTION VI - REACTIVITY DATA

STABILITY	STABLE	XX		CONDITIONS TO AVOID
	UNSTABLE			

INCOMPATABILITY (MATERIALS TO AVOID)

Avoid strong oxidizing agents

HAZARDOUS COMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	XX	DO NOT HEAT ABOVE 400 DEG. F

SECTION V11 - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Sweep and Return to container

WASTE DISPOSAL METHOD

Follow local, provincial, state, and federal regulations

SECTION V111 - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE)

None

VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL (GENERAL) X	OTHER

PROTECTIVE GLOVES	EYE PROTECTION
Cloth	

OTHER PROTECTIVE EQUIPMENT

SECTION 1X - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Store below 95 deg. F.

OTHER PRECAUTIONS

Wash after handling

1. Substance/preparation and company identification

Grass Yarn consisting of LLDPE
Use: Grass Yarn for artificial turf

Company:
Morton Extrusionstechnik GmbH
Im Pfarrgrund 5
69518 Abtsteinach
GERMANY
Telephone: +49 6207-92395-0
Fax: +49 6207 92495-39
e-mail: info@morton-extrusionstechnik.de

2. Composition/information on ingredients

Chemical characterization of polymer:
LLD Ethylene/1-Hexene Copolymer, CAS-No: 25213-02-9

Physical characterization:
Grass Yarn with different yarn-count, different colours, wound-up on capable spools

3. Hazard identification

According to Regulation (EC) No. 1272/2008 on classification, labelling and packaging of substances and mixtures:
Label elements and precautionary statement:
The product does not require a hazard warning label in accordance with GHS criteria.

Classification of the substance and mixture:
No need for classification according to GHS criteria for this product.

Possible Hazards (according to Directive 67/548/EWG or 1999/45/EC):
No particular hazards known.

4. First-aid measures

Inhalation
No specific treatment is necessary since this material is not likely to be hazardous by inhalation.
If exposed to excessive levels of dusts or fumes, remove to fresh air and get medical attention if cough or other symptoms develop.

Skin contact
Product, at ambient conditions, is not expected to be hazardous by skin contact. Should irritation occur, rinse with water.
In case of contact with molten product, cool rapidly with water and seek immediate medical attention. Do not attempt to remove solidified polymer from skin.

Eye contact
Flush eyes with water as a precaution. If irritation persists get medical attention.
In case of contact with molten product, cool rapidly with water and seek immediate medical attention.

Ingestion
If swallowed, do NOT induce vomiting. Consult a physician if necessary.

Notes to physician
Contact with molten polymer can cause significant tissue damage. Provide general supportive measures and treat symptomatically.

5. Fire-fighting measures

General fire hazards
Polymer can burn if exposed to a fire. Acetaldehyde vapors form explosive mixtures in air and can spontaneously ignite at temperatures above 347F (175C).

Industrial handling of polymer pellets or chips has the potential to generate dust. Polymer dust can accumulate over time on buildings and equipment. After a significant amount of dust accumulation and disturbance, dust may form explosive mixture in air. Ensure that good housekeeping practices are followed.

Hazardous combustion products
Irritating and toxic gases or fumes may be released during a fire.
Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Molten polymer or prolonged air drying of polymer at temperatures above 195 °C will release small quantities of acetaldehyde (CAS# 75-07-0).

Suitable extinguishing media
Dry chemical, CO2, water spray or regular foam.

Extinguishing media which must not be used for safety reasons
Do not use a solid water stream as it may scatter and spread fire.

Protection of fire-fighters
Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

Specific methods
In the event of fire and/or explosion do not breathe fumes.

6. Accidental release measures

Personal precautions
Surfaces may become slippery after spillage.

Methods for cleaning up
Clean up in accordance with all applicable regulations.

Other information
Sweep up or gather material and place in appropriate container.

7. Handling and storage

Handling
Use care in handling/storage.
Molten material can cause burns. Handle molten material with care.

Storage
Keep away from heat, sparks, and flame.

Further information
Use good housekeeping methods to keep accumulation of dust to a minimum

8. Expose controls and personal protection

Addition Exposure Data
No exposure limit value known

Engineering measures
Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Personal protective equipment

Respiratory protection
When dusts or thermal processing fumes are generated and ventilation is not sufficient to effectively remove them, appropriate respiratory protection must be provided.

Hand protection
Not normally needed under ambient conditions.
For molten material use heat resistant gloves.

Eye protection
Wear safety glasses with side shields.
If handling molten material, additional protection may be needed, which may include face shield.

Skin and body protection
It is a good industrial hygiene practice to minimise skin contact.
When material is heated, wear gloves to protect against thermal burns.

Hygiene measures
Use good industrial hygiene practices in handling this material. Wash hands before breaks and at the end of workday.

9. Physical and chemical properties

Colour	Based on specification.
Form	Solid.
Odour	Slight to none.
Auto-ignition temperature	> 300°C
Boling point	not determined
Decomposition temperature	> 300 °C
Flashpoint	closes cup: > 300 °C
Melting point	115 to 132 °C
Octanol / H2O Coeff	not determined
Odour threshold	not determined
pH	not determined
Solubility (H2O)	insoluble

10. Stability and reactivity

Stability
This is a stable material.

Conditions to avoid
Heat, flames and sparks.

Hazardous polymerisation
Not expected to occur.

11. Toxicological Information

Toxicological information
Due to this material's high molecular weight, this material is considered to be of little to no toxicological concern.

Acute toxicity
LD50/oral/rat: >5.000 mg/kg

Mutagenicity
No known significant effects or critical hazards.

Teratogenicity
No known significant effects or critical hazards.

Developmental effects
No known significant effects or critical hazards.

12. Ecological Information

Ecotoxicity
This material is not expected to be harmful to aquatic life.

Persistence and degradability
Based on the physical properties of this product, significant environmental persistence and bioaccumulation would not be expected.

13. Disposal consideration

Disposal Instructions
Dispose in accordance with all applicable regulations.

14. Transport Information

ADR Not regulated as dangerous goods.

IMDG Not regulated as dangerous goods.

IATA Not regulated as dangerous goods.

15. Regulatory Information

Regulations of the European union (Labelling) / National legislation/Regulations

Directive 1999/45/EC ('Preparation Directive')
The product does not require a hazard warning label in accordance with EC-Directives

16. Other information

This MSDS is related to Regulation (EC) No. 1907/2006, even though the product is not hazardous and there is no duty to issue a MSDS.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements.
The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet.
It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

1.877.MAMMOUTH
www.soprema.ca

FIELDTURF ADHESIVE
(Fixrus 504)

TECHNICAL DATA SHEET
140623SCAN1E
(supersedes -)

DESCRIPTION
FIELDTURF ADHESIVE is a low viscosity hot melt SBS modified bitumen adhesive.

INSTALLATION
FOR COMPLETE INFORMATION ON PRODUCT INSTALLATION, PLEASE CONSULT THE INSTALLATION INSTRUCTIONS SUPPLIED BY FIELDTURF.

PROPERTIES

Properties	Standards	FIELDTURF ADHESIVE
Softening point	ASTM D36	100 °C (212 °F)
Penetration at 25 °C (77 °C), (1/10 mm)	ASTM D5	100
Col bending	ASTM D5147	-30 °C (-22 °F)
Elongation	ASTM D5147	> 1200 %
Flash point	C.O.C.	> 211 °C (412 °F)
Peel strength at 22 °C (72 °F)	ASTM D903	550 N/m (3 lbs/in)
Shear strength at 22 °C (72 °F)	ASTM D6392	7240 N/m (42 lbs/in)

(All values are nominal)

BROOKFIELD VISCOSITY (SPINDEL 34)

Temperature (°C /°F)	Viscosity (poises)
140 / 284	90
150 / 302	55
160 / 320	35
170 / 338	25
180 / 356	13
200 / 392	7

Viscosity values might vary because of oil crudes.
(All values are nominal)

CAUTION
- Never heat the adhesive over 200 °C (392 °F), otherwise there is a risk of product deterioration.
- For recommanded temperature installation, please refer to Fieldturf instructions.
- Never leave the adhesive in the hot kettle for more than 12 hours in a row.

PACKAGING
25 kg (55 lbs) keg, 18 kegs / pallet (2 pallets of 9 units).

STORAGE & HANDLING
- Do not store outside directly exposed to the sun, keep it inside out of excessive temperatures.
- In case of freezing , just condition it at room temperature for a period of 48 hours before the use of it.
- Shelf Life : 3 years when stored inside, under normal conditions.

E-FIELDTURF.indd