



Material Name: SofTILE® DuraSAFE® Safety Tiles

***** Section 1 - Product Identification and Use *****

Part Number: NA
Chemical Name: Rubber Crumb and Polyurethane
Product Use: Resilient safety surfacing system

Manufacturer Information

Corporate Headquarters
4393 Discovery Line, Phone: (800)-263-2363
P.O. Box 239 Fax: (519) 882-2697
Petrolia, ON Canada International: (519) 882-8799
NON 1R0

***** Section 2 - Composition / Information on Ingredients *****

CAS #	Component	Percent by Wt.
NA	Rubber Crumb	90 to 92
9009-54-5	Polyurethane	8 to 10

Component Related Regulatory Information

This product is not regulated with respect to occupational exposure limits since the components are fully reacted products.

Rubber crumb from tire shreds is non-reactive under normal environmental conditions. The principal chemical component of tires is a blend of natural and synthetic rubber, but additional components include carbon black, sulfur, polymers, oil, paraffins, pigments, fabrics and bead or belt materials. ⁽¹⁾

Polyurethane is a reaction product of 4,4' Methylene Bisphenyl Isocyanate (MDI) and polyol.

Component Information/Information on Non-Hazardous Components

This product is not considered hazardous under 29CFR 1910.1200 Hazard Communication criteria. It is not considered hazardous according to Canada's Controlled Products Regulations. Uncontrolled product according to WHMIS classification criteria.

***** Section 3 - Physical Data *****

PHYSICAL STATE: Solid at ambient temperature.
ODOR AND APPEARANCE: Odour of vehicle rubber tire. Black in color unless colorant added.
ODOUR THRESHOLD: NA
VAPOUR PRESSURE (mm Hg): NA



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EVAPORATION RATE: NA
VAPOR DENSITY (Air = 1): NA
BOILING POINT: NA
FREEZING POINT (°C): NA
pH: NA
SPECIFIC GRAVITY: NA

*** Section 4 - Fire and Explosion Data ***

FLAMMABILITY

YES NO IF YES, UNDER WHICH CONDITIONS? Material will not burn unless preheated and exposed to open flame.

MEANS OF EXTINCTION: CO₂, Dry chemicals, Foam.

FLASHPOINT (°C) AND METHOD: Not known.

UPPER FLAMMABLE LIMIT (% BY VOLUME): NA

LOWER FLAMMABLE LIMIT (% BY VOLUME): NA

AUTOIGNITION TEMPERATURE (°C) = NA

HAZARDOUS COMBUSTION PRODUCTS: Black dense haze smoke, CO, CO₂, other unidentified compounds. Possibly MDI vapors and oxides of nitrogen. If ignited, foam can produce rapid flame spread, intense heat and toxic gases. Material can melt into a burning liquid that can drip and flow.

EXPLOSION SENSITIVITY TO IMPACT DATA = NA

SENSITIVITY TO STATIC DISCHARGE = NA

*** Section 5 - Reactivity Data ***

CHEMICAL STABILITY

YES NO IF NO, UNDER WHICH CONDITIONS? Stable at ambient conditions

INCOMPATIBILITY WITH OTHER SUBSTANCES

YES NO IF SO, WHICH ONES?

REACTIVITY, AND UNDER WHAT CONDITIONS?

Strong oxidizing acids - will degrade

HAZARDOUS DECOMPOSITION PRODUCTS

See hazardous combustion products of thermal decomposition (Section 4).

*** Section 6 - Toxicological Properties ***

ROUTE OF ENTRY

SKIN CONTACT SKIN ABSORPTION EYE CONTACT INHALATION INGESTION

Inhalation of fine particulate may occur if product is subject to cutting or mechanical abrasion.

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EFFECTS OF ACUTE EXPOSURE TO PRODUCT Hot product may cause minor to severe burns when in contact with skin.
 EFFECTS OF CHRONIC EXPOSURE TO PRODUCT = NA
 EXPOSURE LIMITS = NA
 IRRITANCY OF PRODUCT = NA
 SENSITIZATION TO PRODUCT = NA
 CARCINOGENICITY: Finished product not listed as carcinogen.
 TERATOGENICITY: NA
 REPRODUCTIVE TOXICITY: NA
 MUTAGENICITY: NA
 SYNERGISTIC PRODUCTS: NA

***** Section 7 - Preventive Measures *****

PERSONAL PROTECTIVE EQUIPMENT:		
GLOVES (SPECIFY) Not required for finished product	RESPIRATOR (SPECIFY) Under normal conditions not required.	EYE (SPECIFY) Safety Goggles when installing product.
FOOTWEAR (SPECIFY) Safety footwear when installing product.	CLOTHING (SPECIFY) no special clothing required.	OTHER (SPECIFY) As required by situation
ENGINEERING CONTROLS (SPECIFY, EG. VENTILATION, ENCLOSED PROCESS.) Under normal conditions respiratory protection is not required.		
LEAK AND SPILL PROCEDURE Permit material to cool to a solid. Cover with earth to reduce adhesiveness. Place in appropriate containers.		
WASTE DISPOSAL Place in appropriate containers for transporting to a waste disposal site.		
HANDLING PROCEDURES AND EQUIPMENT When hot use safety protective clothing and equipment.		
STORAGE REQUIREMENTS None required.		
SPECIAL SHIPPING INFORMATION No specific requirements.		

***** Section 8 - Hazards Identification *****

Emergency Overview
 Product is a flammable at high temperatures ranging between 340 and 400 degrees Celsius
 This product is harmful if it catches fire. Firefighters should wear full protective equipment including self-contained breathing apparatus.
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Potential Health Effects: Eyes

This product is harmful only if it catches fire. Irritation may be severe.

Potential Health Effects: Skin

This product is only harmful if it catches fire. Irritation may be severe.

Potential Health Effects: Ingestion

Ingestion is highly unlikely.

Potential Health Effects: Inhalation

Products of combustion are irritating to the respiratory system.

Medical Conditions Aggravated

None known.

Potential Environmental Effects

This product was analyzed and results compared to Ontario Regulation 558 Leachate Criteria (See Section 11 Ecological Information).

HMIS Ratings: Health: 0 Fire: 1 Reactivity: 0 Pers. Prot.: not required

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

*** * * Section 9 - First Aid Measures * * ***

First Aid: Eyes

Immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention or advice.

First Aid: Skin

Not applicable

First Aid: Ingestion

If swallowed, get immediate medical attention or advice. Do not induce vomiting. Never give anything by mouth to an unconscious person.

First Aid: Inhalation

If products of combustion are inhaled immediately remove the affected person to fresh air. Seek medical attention if symptoms develop or persist.

*** * * Section 10 - Fire Fighting Measures * * ***

Flash Point: Not Determined **Method Used:** NA

Upper Flammable Limit (UFL): Not Determined **Lower Flammable Limit (LFL):** Not Determined

Auto Ignition: Not Determined **Flammability Classification:** Flammable (OSHA Class IB)

Rate of Burning: Not Determined

General Fire Hazards

Do not weld near product.

Hazardous Combustion Products

Upon decomposition, this product may produce carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Thermal decomposition may release isocyanate.

Extinguishing Media

Dry chemical, foam, carbon dioxide. Use water to cool fire and to protect personnel.



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Fire Fighting Equipment/Instructions

Firefighters should wear full protective equipment including self-contained breathing apparatus.

NFPA Ratings: Health: 3 Fire: 3 Reactivity: 0 Other:

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

* * * Section 11 - Environmental/Ecological * * *

Material was analyzed and compared against Ontario Regulation 558 Leachate Criteria (report No. 41577 - March 2, 2001). All metals were below Leachate Quality Criteria. Fluoride, Nitrate + Nitrite, and Cyanide were below limits of detection. Volatile Organic Compounds were not detected.

ENVIRONMENTAL FATE

Movement & Partitioning: Based on information for MDI and polymeric MDI. In the aquatic or terrestrial environment, movement is expected to be limited by its reactivity with water forming predominantly insoluble polymers.

Degradation & Persistence: Based on information for MDI and polymeric MDI. In the environment this material reacts with water forming insoluble polymers which appear to be stable.

Ecotoxicity: Based on information for MDI and polymeric MDI. This material is practically non-toxic to aquatic organisms on an acute basis (LC50 greater than 100 mg/L in most sensitive species).

REFERENCES

1. Schnormeier, Russell. "Recycled Tire Rubber in Asphalt," Presented at the 71st Annual Meeting of the Transportation Research Board, Washington, DC, 1992.

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