






Material Safety Data Sheet

NFPA	WHMIS	PPE	Transport Symbol
			Not Regulated

Preparation Date No data available

Revision Date 12-Feb-2013

Revision Number 6

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	Tuff-Stuff®
Product Code	2135
UN-No	Not available
Contact Manufacturer	
The Garland Company, Inc. 3800 East 91st. Street Cleveland, Ohio 44105-2197 Ph: (800) 762-8225 Fax: (216) 641-0633	Garland Canada, Inc. 209 Carrier Dr. Toronto, Ontario M9W 5Y8 Ph: (416)747-7995 (800)387-5991 Fax: (416)747-1980
Emergency Telephone Number	1-800-762-8225 (24 Hrs.)

2. HAZARDS IDENTIFICATION

Appearance Not available	Emergency Overview Combustible material	
	Physical State - Liquid - Solid	Odor - Petroleum distillates

Mexico - Grade Slight risk, Grade 1

Potential Health Effects

Principle Routes of Exposure Skin contact. Inhalation.

Acute Effects

Eyes

Skin

Contact with eyes may cause irritation.

Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Inhalation

Ingestion

Irritating to mucous membranes.

May be harmful if swallowed.

Chronic Effects Repeated contact may cause allergic reactions in very susceptible persons.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions Not available

Interactions with Other Chemicals Not available

Potential Environmental Effects See Section 12 for additional Ecological information

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Calcium Carbonate	1317-65-3	30 - 60
Urethane Prepolymers	1321-38-6	10 - 30
Di-n-octylphthalate	117-84-0	5 - 10
Silica Dioxide	7631-86-9	1 - 5
Toluene Diisocyanate	26471-62-5	0.1 - 1
Toluene Sulfonyl Isocyanate	4083-64-1	0.1 - 1

4. FIRST AID MEASURES

Eye Contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin Contact Wash off immediately with soap and plenty of water.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician.

Ingestion Drink plenty of water to dilute the material in the stomach. Consult a physician.

Notes to Physician Treat symptomatically

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Carbon dioxide (CO₂). Foam. Dry chemical.

Unsuitable Extinguishing Media Not available

Hazardous Combustion Products Carbon dioxide (CO₂), Hydrocarbons.

Explosion Data

Sensitivity to mechanical impact	No
Sensitivity to static discharge	Yes

Specific Hazards Arising from the Chemical

Combustible material. Keep product and empty container away from heat and sources of ignition.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

NFPA

Health 2

Flammability 2

Instability 1

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment.

Environmental Precautions Do not flush into surface water or sanitary sewer system. Local authorities should be advised if significant spillages cannot be contained.

Methods for Containment No information available

Methods for Cleaning Up Shovel or sweep up. Keep in suitable and closed containers for disposal.

Other Information Not applicable

7. HANDLING AND STORAGE

Handling Wear personal protective equipment. Keep away from open flames, hot surfaces and sources of ignition.

Storage Keep in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	Ontario TWAEV	Mexico
Calcium Carbonate		TWA: 15 mg/m ³ TWA: 5 mg/m ³	TWA: 10 mg/m ³	STEL: 20 mg/m ³ TWA: 10 mg/m ³
Toluene Diisocyanate	TWA: 0.005 ppm STEL: 0.02 ppm		CEV: 0.02 ppm CEV: 0.8 µmol/m ³ TWA: 0.005 ppm TWA: 0.2 µmol/m ³	

Chemical Name	NIOSH IDLH
Silica Dioxide	3000 mg/m ³

IDLH: Immediately Dangerous to Life or Health

Engineering Measures Ensure adequate ventilation, especially in confined areas. Do not allow ventilation equipment to draw material odors indoors.

Personal Protective Equipment
Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Not available	
Odor	Petroleum distillates	
Physical State	Liquid Solid	
pH	Not available	
Flash Point	> 200°F / > 93°C	
Method	Tag Closed Cup	
Autoignition Temperature	Not available	
Boiling Point/Range	Not available	
Freezing Point	Not available	
Flammability Limits in Air	Lower Not available	Upper Not available
Explosive Properties	Not available	
Oxidizing Properties	Not available	
Evaporation Rate	Slower than Ether (ether = 1)	
Vapor Pressure	Not available	
Vapor Density	Not available	
Specific Gravity	1.4	
Water Solubility	Insoluble in water	
Volatiles	Not available	
VOC Content		

10. STABILITY AND REACTIVITY

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Stability	Stable under normal conditions.
Conditions to Avoid	Open flames and intense heat. Protect from water.
Incompatible Materials	No materials to be especially mentioned
Hazardous Decomposition Products	Nitrogen oxides (NOx). Carbon dioxide (CO2).
Possibility of Hazardous Reactions	Hazardous polymerization does not occur

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Di-n-octylphthalate	47 g/kg Rat		
Silica Dioxide	5000 mg/kg Rat	2000 mg/kg Rabbit	
Toluene Diisocyanate	3360 mg/kg Rat	10000 mg/kg Rabbit	0.1 mg/L Rat 4 h 13.9 ppm Rat 4 h 66 ppm Rat 1 h
Toluene Sulfonyl Isocyanate			640 ppm Rat 1 h

Chronic Toxicity

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA	Mexico
Toluene Diisocyanate		Group 2B	Reasonably Anticipated	X	

12. ECOLOGICAL INFORMATION

Ecotoxicity

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants

Silica Dioxide

Freshwater Algae Data

Selenastrum capricornutum EC50=440 mg/L (72 h)

Silica Dioxide**Water Flea Data***Ceriodaphnia dubia* EC50=7600 mg/L (48 h)

Persistence/Degradability	Not available
Bioaccumulation/ Accumulation	Not available
Mobility in Environmental Media	Not available

Di-n-octyiphthalate**log Pow = 9.2**

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method	Dispose of in accordance with local, state, and federal regulations.
Contaminated Packaging	Empty containers should be taken for local recycling, recovery or waste disposal.
US EPA Waste Number	Not available

Chemical Name	RCRA
Di-n-octyiphthalate - 117-84-0	waste number U017
Toluene Diisocyanate - 26471-62-5	waste number U223

14. TRANSPORT INFORMATION

<u>DOT</u>	Not Regulated
<u>TDG</u>	Not regulated
<u>MEX</u>	Not regulated
<u>ICAO</u>	Not regulated
<u>IATA</u>	Not regulated
<u>IMDG/IMO</u>	Not regulated

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	CHINA	KECL	PICCS	AICS
Calcium Carbonate	X	X	X	X	X	X	X	X	X	X
Urethane Prepolymers	X	X	X	X	X	X	X	X	X	X
Di-n-octylphthalate	X	X	X	X	X	X	X	X	X	X
Silica Dioxide	X	X	X	X	X	X	X	X	X	X
Toluene Diisocyanate	X	X	X	X	X	X	X	X	X	X
Toluene Sulfonyl Isocyanate	X	X	X	X	X	X	X	X	X	X

TSCA	Complies
DSL	Complies
NDSL	Complies
EINECS	Complies
ELINCS	Complies
ENCS	Complies
CHINA	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

USA**Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40n of the Code of Federal Regulations, Part 372:

Chemical Name	SARA 313 - Threshold Values
Toluene Diisocyanate (CAS #: 26471-62-5)	0.1%

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any HAPs.

State Regulations**California Proposition 65**

This product contains the following Proposition 65 chemicals:

Chemical Name	CAS-No	Category	Type
Toluene Diisocyanate	26471-62-5	Carcinogen	

State Right-to-Know

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Calcium Carbonate	X		X		X

Di-n-octylphthalate	X	X	X	X	
Silica Dioxide	X	X	X		
Toluene Diisocyanate	X		X		

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

D2A Very toxic materials

16. OTHER INFORMATION

Revision Date 12-Feb-13

Revision Summary Composition information

Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS