



MATERIAL SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION AND COMPANY INFORMATION

PRODUCT TYPE: Steel fibers for concrete reinforcement

TRADE NAMES: HELIX™

CONTACT:

Polytorx, LLC

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USA

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2 COMPOSITION / INFORMATION ON INGREDIENTS

MATERIAL	CAS#	CONTENTS (%WT)
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Steel fiber	N/A	100%
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Composed of a mixture of the following:

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|------------------------|-----------|---------|
| • Base Metal Iron (Fe) | 7439-89-6 | Various |
| • Manganese (Mn) | 7439-96-5 | Various |
| • Carbon (C) | 7440-44-0 | Various |
| • Silicon (Si) | 7440-21-3 | Various |
| • Zinc (Zn) | 7440-66-6 | Various |

3 HAZARDS IDENTIFICATION

OVERVIEW: Based upon data available to Polytorx, this product is not hazardous under OSHA Hazard Communication (29 CFR 1910.1200) and EC Directive 93/21/EEC as amended by 96/54/EC. Strong Acids react with steel to produce flammable

Hydrogen gas.

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATING:

HEALTH: 0

FLAMMABILITY: 0

REACTIVITY: 1

4 FIRST AID MEASURES

EYES: As for any foreign body, use eyewash. If accompanied by pain or irritation, consult physician.

SKIN: Steel fibers can create cuts or puncture wounds. Treat symptomatically.

INHALATION:

INGESTION:

5 FIRE FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, % BY VOLUME

LOWER: N/A UPPER: N/A

EXTINGUISHING MEDIA:

N/A

UNUSUAL FIRE OR EXPLOSION HAZARDS: Reaction with strong acids will liberate Hydrogen gas.

SPECIAL FIRE FIGHTING PROCEDURES: Steel products in the solid state present no fire or explosion hazard.

6 ACCIDENTAL RELEASE MEASURES

Product requires no spill or leak containment. Dispose of damaged material in accordance with all governmental regulations.

7 HANDLING AND STORAGE

STORAGE: Store away from oxidizing materials and strong acids in a cool dry place.
HANDLING: No special handling required.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

VENTILATION REQUIREMENTS: Not required for normal use

PERSONAL PROTECTIVE EQUIPMENT:

EYE PROTECTION: Not required unless physical contact with eyes is likely.

HAND AND SKIN PROTECTION: Work gloves are recommended for handling bags of fiber or loose fiber

RESPIRATORY PROTECTION: Not required.

OTHER REQUIRED EQUIPMENT: Standard work clothing and shoes.

9 PHYSICAL AND CHEMICAL PROPERTIES

Physical Form	Metal fibers packaged in cardboard boxes
Appearance	Metal fibers
Odor	Essentially Odorless
pH	N/A
Melting Point	>2700°F(1482°C)
Solubility in Water	Insoluble
Specific Gravity	Approximately 7 to 8
Vapor Density	N/A
Boiling Point	N/A
% Solids:	~100%
Flash Point:	N/A
Autoignition Temperature:	N/A

10 STABILITY AND REACTIVITY

STABLE

CONDITIONS TO AVOID: Store indoors away from water

MATERIALS TO AVOID: Strong oxidizing agents and strong acids

HAZARDOUS POLYMERIZATION: Will not occur

HAZARDOUS COMBUSTION PRODUCTS: Inhalation of high concentrations of freshly formed oxide fumes may cause metal fume fever characterized by a metallic taste in the mouth, dryness and irritation of the throat and influenza type symptoms.

11 TOXICOLOGICAL INFORMATION

LISTED AS CARCINOGEN BY: IARC: No
NTP: No
OSHA: No
PEL(OSHA Permissible Exposure Limit): None established
TLV(ACGIH Threshold Limit): Base Metal Iron (Fe) 5 (as Iron Oxide)
Manganese (Mn) 5 (as Dust)
Carbon (C) None Established
Silicon (Si) 10 (Total Dust)
Zinc (Zn) 5 (as Dust)
ROUTES OF EXPOSURE
INHALATION: Not Likely
SKIN CONTACT: Likely
SKIN ABSORPTION: N/A
EYE CONTACT: Not Likely
INGESTION: Not Likely
EFFECTS OF OVEREXPOSURE
ACUTE OVEREXPOSURE: N/A
CHRONIC OVEREXPOSURE: N/A

12 ECOLOGICAL INFORMATION

No data available.

13 DISPOSAL CONSIDERATIONS

Transfer to an approved disposal area in accordance with all governmental regulations. Based on information available to Polytorex, this material is not hazardous.

14 TRANSPORT INFORMATION

DOT CLASSIFICATION: Not controlled under DOT (United States)
TDG CLASSIFICATION: No data available
ADR/RID CLASSIFICATION: No data available
ICAO/IATA CLASSIFICATION: No data available
IMO/IMDG CLASSIFICATION: No data available

15 REGULATORY INFORMATION

Federal Regulations (USA): All materials in this product are listed on the TSCA inventory. This product contains no ingredients subject to reporting under SARA 313 (40 CFR Part 372) or SARA Section 311/312
International Regulations: No data available

16 OTHER INFORMATION

The information contained herein is based on the data available to us and is believed to be correct. However, Polytorex, LLC makes no warranty, expressed or implied, regarding the accuracy of these data or the results to be obtained from the use thereof. Polytorex, LLC assumes no responsibility for the use of the product described herein.