

## DESCRIPTION

**FiberForce T5** is a low carbon, cold-drawn steel wire fiber, which meets the requirements of ASTM A820 Type V. The continuously deformed Type V steel fiber also meets the requirements of ASTM C1116, Section 4.1.1. FiberForce T5 was developed for use as temperature-shrinkage reinforcement and post-first crack toughness in concrete.

## HAZARDS IDENTIFICATION

**Emergency Overview:** This product does not require any hazard warning on the label under OSHA criteria.

**GHS Classification:** Not a hazardous substance or mixture according to the Globally Harmonized System (GHS).

### Potential Health Effects

- Eye Contact - No significant health hazards identified. Particles may cause slight discomfort, similar to getting dust in eye.
- Skin Contact - No significant health hazards identified. Particles may cause slight discomfort similar to rubbing sand on skin.
- Inhalation - No significant irritation expected other than possible mechanical irritation. When heated, the vapors/fumes given off may cause respiratory tract irritation.
- Ingestion - No significant health hazards identified.
- HMIS Hazard ID - (Health: 0) (Flammability: 0) (Reactivity: 0)
- NFPA Hazard ID - (Health: 0) (Flammability: 0) (Reactivity: 0)

## FIREFIGHTING MEASURES

- **Flashpoint** - Not applicable.
- **UEL** - Not determined.
- **LEL** - Not determined.
- **Autoignition Temperature** - Not determined.
- **Flammability Classification** - None.
- **Extinguishing Media** - Agents approved for Class A hazards (e.g., halogenated agents, foam, steam) or water fog.
- **Unusual Fire and Explosion Hazards** - None identified.
- **Fire Fighting Equipment** - Firefighters should wear full bunker gear, including a positive pressure self-contained breathing apparatus.
- **Hazardous Combustion Products** - Incomplete burning can produce carbon monoxide and/or carbon dioxide and other harmful products.

## EXPOSURE GUIDELINES

	CAS #	T.L.V. (as fume) mg/m	P.E.L. (as fume) mg/m	Ld50/Lc50 (as fume) mg/m
Iron	7439-89-6	5.0	10.0	30g/kg (1d oral rat)
	7439-96-5	0.2	5.0	9g/kg (1d oral rat)
Nickel	7440-02-0	1.0	1.0	N/A
	7440-47-3	0.5	0.5	N/A

## TOXICOLOGICAL INFORMATION

### Acute Toxicity Data

- Eye Irritation - Testing not conducted.\*\*
- Skin Irritation - Testing not conducted.\*\*
- Dermal LD50 - Testing not conducted.\*\*
- Oral LD50 - Testing not conducted.\*\*
- Inhalation LD50 - Testing not conducted.\*\*

### \*\*Other Toxicity Data

Specific toxicity tests have not been conducted. Hazard evaluation is based on similar product information, the ingredients, technical literature, and/or professional experience.

## HANDLING AND STORAGE

- Handling - No special requirements.
- Storage - No special requirements.

## FIRST AID MEASURES

- Eyes - Flush eyes with plenty of water. Seek medical attention if irritation persists.
- Skin - Wash exposed skin with soap and water. Seek medical attention if irritation develops.
- Inhalation - If adverse effects occur, remove to uncontaminated area.
- Ingestion - If a large amount is swallowed, seek medical attention.

## ACCIDENTAL RELEASE MEASURES

Contain and remove by mechanical means.

## PERSONAL PROTECTION

- Eyes - None required; however, if contact is likely, safety glasses with side shields are recommended.
- Skin - None required; however, use of protective gloves/clothing is a good industrial practice.
- Inhalation - None required; however, use of adequate ventilation is a good industrial practice.
- Specific Hygiene Measures - Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

## STABILITY AND REACTIVITY

- Stability - Stable.
- Conditions to Avoid - None identified.
- Materials to Avoid - Contact with acids will release Hydrogen gas.
- Hazardous Decomposition Products - N/A.
- Hazardous Polymerization - Will not occur.

## DISPOSAL CONSIDERATIONS

Ecological testing has not been conducted on this product.

## ECOLOGICAL INFORMATION

Enclosed-controlled incineration is recommended unless directed by applicable ordinances.

## TRANSPORTATION INFORMATION

- U.S. Department of Transportation - Not regulated for transport.
- SEA (IMDG) - Not determined.
- AIR (IATA) - Not determined.
- European Road/Rail (ADR/RID) - Not determined.
- Canadian Transport of Dangerous Goods - Not determined.

## COMPOSITION / INGREDIENT INFORMATION

The below ingredient list identifies those components which meet the regulated reporting criteria. Concentrations represent a maximum for all grades in a category of steel products.

Component	CAS #	Range % By Weight
Iron	7439-89-6	>99
Manganese	7439-96-5	2.2
Nickel	7440-02-0	2.05
Chromium	7440-47-3	1.65

## PHYSICAL AND CHEMICAL PROPERTIES

- Appearance - Fibers.
- Odor - None.
- PH - Not determined.
- Vapor Pressure - Not determined.
- Vapor Density - Not determined.
- Boiling Point - Not determined.
- Melting Point - Not determined .
- Solubility in Water - Negligible, below 1%
- Specific Gravity (Water=1) - 0.91

LIMITED EXPRESS WARRANTY, DISCLAIMER OF IMPLIED WARRANTIES AND LIMITATION OF LIABILITY: As used herein, the term "FiberForce" is a product sold by ABC Polymer Industries, LLC and its subsidiaries ("ABC"). The terms of ABC's invoices including this warranty and limitation of liability, without limitation, shall be governed by and construed in accordance with the laws of the State of Alabama where it was manufactured and from where it was shipped. FiberForce fibers are intended to reduce plastic shrinkage cracking but should not be used as structural reinforcement. ABC's warranty is solely to the purchaser (and no other party) and (1) is limited to a period of 180 days from the date of its invoice and (2) is that the product sold is of good quality and conforms to the seller's most recent published standards and specifications. ABC expressly disclaims any and all other warranties including, without limitation, merchantability and fitness for particular purpose. The seller's sole liability for any claim shall be limited to the cost of replacement of defective or non-conforming product, and not for any of purchaser's other alleged costs. In no event shall the seller be liable for any special, incidental, consequential, liquidated, punitive, or exemplary damages, or for claims of lost profits or lost jobs. Purchaser itself shall determine the suitability of the product(s) for its own particular application. ABC engineering and sales personnel are available to assist in providing information to allow purchaser to select the appropriate fiber for a given application, and will provide an overview of anticipated performance based upon experience and testing data. ABC personnel will provide information as requested but the design and implementation of purchaser's product is solely the responsibility of purchaser. ABC will provide on-site support as requested and when deemed necessary but will not participate in the supervision of any project, or be responsible for its installation or outcome. FullForce's responsibility is to support our customers and to provide our customers with the best materials and assistance in marketing these products. © 2023 FullForce by ABC Polymer Industries, LLC.