STRUX® 75/32
Synthetic Macro Fiber for reinforcement of concrete

Product Description

STRUX®75/32 Fiber is a synthetic macro fiber complying with ASTM C1116/C1116M Type III, which can be used in ready-mixed concrete for different applications such as slab-on-ground flooring, thin-walled precast overlays and pavements.

STRUX®75/32 fibers are extruded from a virgin polypropylene and polyethylene polymer blend. The geometry, strength and high modulus is specifically engineered to provide high post-crack control performance with excellent dispersion into the concrete matrix, reducing plastic and hardened concrete shrinkage cracking, increasing fatigue resistance and concrete toughness. STRUX®75/32 fiber is a user-friendly fiber reinforcement, which is easier and safer to use, compared to other types of reinforcement.

Advantages

- Easy to mix and fast to disperse.
- Barely visible on the surface obtaining highly aesthetical concrete.
- Uniformly built into the concrete, eliminating a concern over proper positioning of reinforcement.
- Due to unique fiber design both plastic as well as drying shrinkage cracking is reduced, which improves the ductility and durability of the concrete.
- Can be used to completely or partially replace light rebar, welded wire mesh and steel fibers.
- Corrosion Resistant (non-ferric)
- Saves time by getting rid of a phase in the construction process (amount of fitting and levelling of reinforcements is eliminated or reduced)
- Reduction of storage, transportation and delivery costs for reinforcing welded wire mesh
- Ease of pumping, passes easily through pump grates

USES

Slab on ground:

STRUX®75/32 Synthetic Macro Fiber is specially designed for ease of use, rapid dispersion in concrete, excellent finishability and improved pumpability in slab-on-ground flooring, in commercial, industrial, and residential floors, as well as other flat work and formwork applications.

Traditional light steel reinforced elements:

STRUX®75/32 Synthetic Macro Fibers can be used as a suitable alternative to WWF or light reinforcing steel specified for temperature and shrinkage reinforcement.
Pre-fabrication concrete:

STRUX®75/32 Synthetic Macro Fibers can be used as a replacement for secondary reinforcements of lightweight pre-fabrication (e.g. staircases, cellars, manholes, pits, Septic tanks, etc.)

White toppings and overlays

STRUX®75/32 Synthetic Macro Fiber is ideal for white toppings and overlays jobs. Due to its rapid dispersion into the mix, the overall project productivity and contractor’s profitability is enhanced.

Addition rates

STRUX®75/32 Synthetic Macro Fiber addition rates are dependent on the specific application and desired properties and will typically vary between 3 to 7.5 lbs./yd³ (1.8 to 4.5 kg/m³).

Mix Design

The utilization of STRUX®75/32 Synthetic Macro Fiber may require the use of a mid-range water reducer or a superplasticizer such as MIRA®water reducers or ADVA®superplasticizers to restore the required workability. In addition, slight increases in fine aggregate contents may be needed.

STRUX®75/32 Synthetic Macro Fibers may be added to concrete at any point during the batching or mixing process. After fiber addition, the concrete must be mixed at the minimum of 70 revolutions to ensure adequate dispersion.

Please contact your GCP Applied Technologies representative with any questions.

Compatibility with Other Admixtures and Batch Sequencing

STRUX®75/32 Synthetic Macro Fibers is compatible with all GCP admixtures. Their action in concrete is mechanical and will not affect the hydration process of the cement or compressive strength. Each liquid admixture should be added separately to the concrete mix.

Technical Properties

<table>
<thead>
<tr>
<th>STRUX® 75/32 Synthetic Macro Fiber Properties</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>1.25 in. (32 mm)</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>0.92</td>
</tr>
<tr>
<td>Absorption</td>
<td>None</td>
</tr>
<tr>
<td>Modulus of elasticity</td>
<td>1,378 ksi (9.5 GPa)</td>
</tr>
<tr>
<td>Tensile strength</td>
<td>90 ksi (620 MPa)</td>
</tr>
<tr>
<td>Melting point</td>
<td>320°F (160°C)</td>
</tr>
<tr>
<td>Ignition point</td>
<td>1,094°F (590°C)</td>
</tr>
<tr>
<td>Alkali, acid &amp; salt resistance</td>
<td>High</td>
</tr>
</tbody>
</table>

Packaging & Storage

STRUX®75/32 fiber is available in 1 lb. or 5 lb. (0.45 kg or 2.3 kg) bags

Finishing

STRUX®75/32 fiber reinforced concrete floors can be finished with most finishing techniques.

STRUX®75/32 fiber does not affect the finishing properties of concrete. Due to its characteristics, STRUX®75/32 fiber is suitable to be used in power/hand troweled concrete, colored and broom finished concrete.

We hope the information here will be helpful. It is based on data and knowledge considered to be true and accurate and is offered for consideration, investigation and verification by the user, but we do not warrant the results to be obtained. Please read all statements, recommendations and suggestions in conjunction with our conditions of sale, which apply to all goods supplied by us. No statement, recommendation or suggestion is intended for any use that would infringe any patent, copyright or other third-party right.

ADVA, MIRA, and STRUX are trademarks, which may be registered in the United States and/or other countries, of GCP Applied Technologies Inc. This trademark list has been compiled using available published information as of the publication date and may not accurately reflect current trademark ownership or status.

© Copyright 2020 GCP Applied Technologies Inc. All rights reserved.

GCP Applied Technologies Inc., 62 Whittemore Avenue, Cambridge, MA 02140, USA

GCP Canada, Inc., 294 Clements Road, West, Ajax, Ontario, Canada L1S 3C6

This document is only current as of the last updated date stated below and is valid only for use in the United States. It is important that you always refer to the currently available information at the URL below to provide the most current product information at the time of use. Additional literature such as Contractor Manuals, Technical Bulletins, Detail Drawings and detailing recommendations and other relevant documents are also available on www.gcpat.com. Information found on other websites must not be relied upon, as they may not be up-to-date or applicable to the conditions in your location and we do not accept any responsibility for their content. If there are any conflicts or if you need more information, please contact GCP Customer Service.

Last Updated: 2020-01-24

gcpat.com/solutions/products/strux-synthetic-macro-fibers/strux-7532