BUILDING TRUST

PRODUCT DATA SHEET

# Novocon® XR-1050

Steel fibres for concrete

## PRODUCT DESCRIPTION

Novocon® XR-1050, steel fibres are designed specifically for the reinforcement of concrete, mortars and other cementitious mixes. Novocon® XR-1050 is a leading, general-purpose, low-carbon, cold drawn segment, wire fibre that is continuously deformed to provide optimum performance within the concrete mix. Novocon® XR-1050 steel fibres European Standard EN 14889-1:2006 compliant and specifically designed to meet or exceed the performance and economic requirements of our customers.

## USES

- Ground supported slabs
- Jointless floors
- External roads & pavements
- Precast
- Overlays
- Walls
- Blast-resistant concrete

## CHARACTERISTICS / ADVANTAGES

- Provides uniform, multi-directional concrete reinforcement
- Increases crack resistance, ductility, energy absorption and toughness of concrete
- Improves impact resistance, fatigue endurance and shear strength of concrete
- High tensile-strength fibre bridges joints and cracks, resulting in increased load-carrying capacity and possible reduction of concrete section
- Requires less labour to incorporate into concrete than conventional reinforcement
- Offers economical concrete reinforcement solutions with greater project scheduling accuracy
- Ideally suited for hand or vibratory screeds, laser screeds and all conventional finishing equipment

## APPROVALS / STANDARDS

- Complies with European Standard EN 14889-1:2006 Fibres for Concrete Part 1: Group IV and carries CE marking
- Conforms to ASTM A820/A820M-04, Type V cold drawn segment wire

**Reference Documents**

- European Standard EN 14889 -1:2006 Fibres for Concrete
- ASTM A820/A820M-04 Standard Specification for Steel Fibers for Fibre Reinforced Concrete.
- ASTM CIII6 /C 1116M Standard Specification for Fiber-Reinforced Concrete and Shotcrete.
- ASTM C 1609/C 1609M Standard Test Method for Flexural Performance of Fiber Reinforced Concrete (Using beam with third-point loading). Replaces ASTM C1018.
- JCI-SF4 Method of Test for Flexural Strength and Flexural Toughness of Fiber Reinforced Concrete.
- Concrete Society (UK) Technical Report 34 Concrete Industrial Floors

## PRODUCT INFORMATION

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| **Chemical Base** | Bright and clean wire (continuously deformed) |
| **Packaging** | Novocon® XR-1050 fibres are available, as standard, in 25 kg packaging. |
| **Shelf Life** | 24 months from date of production |
| **Storage Conditions** | The pallets should be protected against rain and snow. Do NOT stack pal- |

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| | lets on top of each other. |
| **Dimensions** | **Fibre Length:** 50mm ±5% |

## TECHNICAL INFORMATION

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| **Specific Advice** | It is recommended that gloves and eye protection be used when handling or adding Novocon® XR-1050 steel fibres to concrete. |
| **Tensile Strength** | 690 N/mm² minimum |

## APPLICATION INFORMATION

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| **Recommended Dosage** | The fibre dosage will vary depending on the type of application, concrete mix design and the performance/toughness requirements of each particular project. Typically, steel fibre dosage will be in the range of 20 kg to 40 kg per cubic meter. Sika technical staff can offer advice on dosage requirements once performance requirements have been established by the project designer/engineer. |
| **Compatibility** | Novocon® XR-1050 steel fibres are compatible with all curing compounds, superplasticisers, water reducers, hardeners and coatings. |

## VALUE BASE

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

## ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

### REGULATION (EC) NO 1907/2006 - REACH

This product is an article as defined in article 3 of regulation (EC) No 1907/2006 (REACH). It contains no substances which are intended to be released from the article under normal or reasonably foreseeable conditions of use. A safety data sheet following article 31 of the same regulation is not needed to bring the product to the market, to transport or to use it. For safe use follow the instructions given in the product data sheet. Based on our current knowledge, this product does not contain SVHC (substances of very high concern) as listed in Annex XIV of the REACH regulation or on the candidate list published by the European Chemicals Agency in concentrations above 0,1 % (w/w).

## APPLICATION INSTRUCTIONS

### Mixing

Novocon® XR-1050 steel fibres can be added during or after the batching of the concrete but should never be added as the first component. The specified dosage per cubic metre should be steadily added to the concrete mixer and mixed for sufficient time (minimum 5 minutes) at full mixing speed to ensure uniform distribution of the fibres throughout the concrete mix. The use of mid or high-range water reducing admixtures can be advantageous, but is not essential. In order to achieve optimum distribution of fibres we recommend the use of our approved conveyor and/or automated dosing systems which are available upon request. Cardboard boxes and non-degradable bags should NOT be added to the concrete.

### Placing

Novocon® XR-1050 steel fibres can be pumped and placed using conventional equipment. Hand or vibratory screeds and laser screeds can be used with Novocon® XR-1050 steel fibres.

**Finishing**
Conventional finishing techniques and equipment can be used when finishing Novocon® XR-1050 steel fibre concrete. In some cases an extra bull float process is advised and lowering the angle of the power float blades will help to minimize fibre exposure on the surface.

## LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

## LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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