

FIBRE IN ACCIAIO

Steel structural reinforcing fibres

for concrete



Description

The FIBRE IN ACCIAIO are shaped pieces of cold-drawn low-carbon steel wire (according to EN 10016-2 C9D) which, when introduced into the concrete during the mixing phase, allow the contrast net to be eliminated or to collaborate with it.

The shape of the FIBRE IN ACCIAIO, in particular the sigmoid bend at the ends, gives them considerable resistance to slipping.

The FIBRE IN ACCIAIO are supplied in the 3D 45/35 BL version, aligned in plates to facilitate dosing and introduction into the cement mixture.

Field of application

FIBRE IN ACCIAIO are used as a reinforcement of concrete alone or in combination with steel mesh in:

- Industrial floors (with spaced joints).
- Roads.
- Parking areas.

Practical experience has shown unquestionably that the best method of reinforcement for indoor and outdoor industrial floors is achieved with concrete reinforced with wire 6 mesh (10x10) inserted in the lower first third of the casting and the addition in the concrete of 15-20 kg of FIBRE IN ACCIAIO.

Advantages

- Concrete reinforcement with FIBRE IN ACCIAIO reduces floor installation time compared to traditional systems with wire mesh reinforcement.
- The use of FIBRE IN ACCIAIO allows a reduction in the thickness of the jet compared to mesh-reinforced systems.
- The use of FIBRE IN ACCIAIO improves the maximum load that can be supported by the floor thanks to the homogeneous distribution of mechanical stresses in the concrete.
- The homogeneous distribution of FIBRE IN ACCIAIO over the entire thickness of the casting improves crack resistance compared to traditional systems reinforced with wire mesh.
- The use of FIBRE IN ACCIAIO as a reinforcement allows to increase the spacing of the joints.

Product application

In general, it is preferable to add FIBRE IN ACCIAIO directly into the mixer at the batching plant; However, it is also possible to introduce it later into the concrete mixer truck.

► To the concrete batching plant

- FIBRE IN ACCIAIO must be placed together with the aggregates on the conveyor belt.
- Never dose FIBRE IN ACCIAIO as the first component.
- Do not dispose of bags of FIBRE IN ACCIAIO as they are in the mixture to avoid altering the composition of the concrete.

► In the truck mixer

When direct introduction into the mixer is not possible, FIBRE IN ACCIAIO can also be added to the concrete mixer as described below:

- Rotate the barrel at maximum speed (approx. 12-18 rpm).
- Set the minimum slump at 12 cm, without adding water, using fluidizing or superplasticizing additives.
- Add FIBRE IN ACCIAIO at a maximum rate of approx. 60 kg per minute.
- Do not throw the bags of FIBRE IN ACCIAIO as they are into the mix to avoid altering the composition of the concrete;

FIBRE IN ACCIAIO

- When you have finished adding the fibers, continue stirring at the maximum speed of the barrel for 4-5 minutes (about 70 rotations).

Consumption

type of application	minimum consumption	maximum consumption	u.m.	notes
For concrete pumped with aggregate (28) mm	30	120	kg/m ³ di calcestruzzo	
For concrete poured with aggregate (28) mm	30	160	kg/m ³ di calcestruzzo	
For pumped concrete with aggregate (416) mm	30	75	kg/m ³ di calcestruzzo	
For concrete poured with aggregate (416) mm	30	100	kg/m ³ di calcestruzzo	
For pumped concrete with aggregate (432) mm	30	60	kg/m ³ di calcestruzzo	
For concrete poured with aggregate (432) mm	30	80	kg/m ³ di calcestruzzo	
For industrial floors (with steel mesh wire 6 mesh 10x10)	15	25	kg/m ³ di calcestruzzo	

Useful tips for laying

- We recommend the use of a constant particle size curve in the cement mixture.
- Stir the dough until the plates are completely disintegrated and the fibres are released.
- The use of FIBRE IN ACCIAIO does not increase the mixing time compared to normal.
- Always carry out a preliminary test when using special cements or additives.

Technical Data

► PRODUCT IDENTIFICATION DATA			value
Fiber length, L	Mm		35
Wire diameter, D	Mm		0,75
L/D ratio	-		45
Number of fibres/kg fibres	fibre/kg		7900
Tensile strength on wire	N/mm ²		1225
Coating	-		Nobody

Packaging

VARIANT	PACKAGE	ADR	PACKAGE / PALLET	COMPONENTS	NOTES
3D 45/35 BL	bag - 20 kg	NO	50 bags		

ADR legend:

NO = NON-DANGEROUS goods

P* = DANGEROUS goods packed in limited quantities (packed as per ADR Chapter 3.4)

Si = DANGEROUS Goods

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LEGAL NOTES

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It is the user's responsibility to verify in advance, also through suitable tests, the suitability of the product for the intended use, compatibility with the substrate, appropriate environmental application conditions, and the execution of the installation according to workmanship standards, assuming all liability arising from the use of the product and the final result of the works.

Nord Resine reserves the right to modify, at any time and without prior notice, product characteristics, packaging, contained quantities, and this technical documentation. Nord Resine products are intended exclusively for professional use.

This Technical Data Sheet cancels and replaces previous editions. Please check the latest and most updated revision at <https://nordresine.com/en/>

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