Icoustic THERMOCON® cellulose ST (rough) - seamless acoustic spray

Icoustic THERMOCON cellulose ST is a sound absorbing, seamless acoustic sprays based on cellulose fibers that is sprayed-on in spaces where the reduction of reverberation time and sound level as well as improving the acoustics are the aim.

System structure, structure of the elements, materials

Icoustic THERMOCON cellulose is a decorative and sound absorbing product that can be sprayed as a finish onto ceilings and walls of metal, concrete, plaster, wood, and other materials. If there is enough surface area to be covered, almost any color can be chosen.

Icoustic THERMOCON cellulose ST is an industrial rough quality while icoustic THERMOCON cellulose FC and icoustic THERMOCON cellulose SB are known for their aesthetic quality, thanks to the fine fiber structure. By varying the thickness, sound absorption can be 'customized'. Moreover, icoustic THERMOCON cellulose can be used as thermal insulation in parking garages and other places or to renovate existing systems that no longer meet the current thermal insulation requirements.

Shape, dimensions, weight

Thickness of layer :
icoustic THERMOCON cellulose ST: 10-15-20-25-35-45 mm
Density: ca. 2 kg/m2 at 20 mm thickness, depending on the degree of finishing.

Look

Surface structure: regular
Depending on the type of icoustic THERMOCON cellulose, the surface can be more or less structured.
Icoustic THERMOCON cellulose ST: standard, rough structure

Color

icoustic THERMOCON cellulose ST: white, black, light grey and grey
Other colors available on request.

Fire, explosions

Fire reaction in accordance with BS EN ISO 11925-2 and EN 13823 : B-s1,d0
Test reports available for thickness ranging from 12 mm up to 90 mm for white and colored fibers.

Resistance

icoustic THERMOCON cellulose is not resistant to water and oil.

Environment

Environmentally friendly : cradle-to-cradle brons certificate

Mechanical properties

The sprayed materials are impact resistant, but otherwise their mechanical properties are limited.

Thermal properties

Heat transfer coefficient = 0,032 W/(mWK).

Uses, design

Sprayed icoustic THERMOCON cellulose can be used as a finish for smooth or curved surfaces with the original shape retained in public spaces, indoor swimming pools, sports halls, industrial spaces, churches, sound studios, theaters, classrooms, university halls, day care centers and any other location in order to control reverberation time, with the result being an increase in acoustic comfort, the sound level being decreased an clarity of speech optimized.

Application characteristics

The substrate must be airtight, waterproof, clean, dry and free of grease. Any seams and holes in the surface as well as the joints between walls and the ceiling must be sealed in advance in order to prevent airflows through the icoustic THERMOCON cellulose layer. Primer must be applied in advance to untreated wood and metal as well as heavily fouled substrates (nicotine) in order to prevent bleed-throughs.

Profiles

A delineation must me located at the end of the area to be sprayed, against a wall or open window, for example. In the absence of such a delineation, a profile or similar device must be attached to the surface.

Application

icoustic THERMOCON cellulose are sprayed by icoustic teams.

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Acoustic properties

Sound absorption

When you apply icoustic THERMOCON cellulose in various thicknesses you can regulate the acoustics of the space. For an overview of the sound absorption measurements for icoustic THERMOCON cellulose, please refer to the table below

System	125Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	αw	NRC	SAC
THERMOCON® cellulose ST 10 mm	0,10	0,20	0,46	0,66	0,78	0,89	0,45	0,55	D
THERMOCON® cellulose ST 15 mm	0,17	0,26	0,63	0,85	0,93	0,98	0,55	0,65	D
THERMOCON® cellulose ST 20 mm	0,16	0,34	0,74	0,95	0,97	0,86	0,6	0,80	C
THERMOCON® cellulose ST 25 mm	0,23	0,49	0,87	0,96	0,97	0,86	0,75	0,80	C
THERMOCON® cellulose ST 35 mm	0,26	0,62	1,02	1,07	1,01	0,96	0,90	0,95	A
THERMOCON® cellulose ST 45 mm	0,33	0,77	1,12	1,11	1,01	0,93	1,00	1,00	A

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