

Quartzel[®] Sewing thread

Since 1922, Saint-Gobain Quartz formerly known as Quartz & Silice has been a solution provider to Aeronautic, Defense and Railway industries. Based in Nemours (France) and also in Louisville, KY (US), Saint-Gobain Quartz is recognized as the world-wide leader in the production of fused quartz fibers commercialized under the brand name Quartzel[®].



Quartzel[®] fiber is a homogeneous, non-porous, continuous, amorphous, ultra-pure silica glass with a SiO₂ content ≥ 99.95%. Quartzel[®] sewing threads are assemblies of 9µm filaments gathered into strands and then processed with twists and plies. Quartzel[®] sewing threads are offered either dry or coated with PTFE to facilitate its use.

Applications

Sewing thread for highly demanding applications

- High temperature applications
- Assembling of aeronautic thermal insulation blankets
- Industrial fireproof protections

Main properties

- High mechanical strength & virtually no shrinkage at HT
- Low CTE ($0.54 \times 10^{-6} \text{ K}^{-1}$) & good resistance to thermal shock
- Resistant to acids
- Non pollutant material with SiO₂ content above 99.95% (plain Quartzel[®] fiber)
- Excellent flexibility and sewability

TECHNICAL DATA AND SEWING THREAD NOMENCLATURE

SiO₂ content ≥ 99.95%

The following table gives details of PTFE coated Quartzel[®] sewing thread:

PTFE Coated sewing thread	Nominal linear density (ISO 1889/ASTM D1907)**	Tensile strength (ISO 3341/ASTM D2256)**	Approx. Diameter	Typical binder content
	Tex	Typical value in daN***	mm	%
Quartzel [®] Q18	250	11.2	0.43	20
Quartzel [®] Q24	340	15.6	0.51	20

Standard bobbin weight : 1 lbs.

with a slight internal modification to adapt to quartz material *Lbf = 2.25 x daN

The following table gives details of dry Quartzel[®] sewing thread:

Dry sewing thread		Nominal linear density (ISO 1889/ASTM D1907)**	Tensile strength (ISO 3341/ASTM D2256)**	Approx. Diameter	Typical binder content
Based on ISO 2078 (Europe)	US customary system	Tex	Typical value in daN***	mm	%
C9 33x2x2 Z160 QS13	300 2/2/2 QS13	133	8	0.36	0.5
C9 33x2x3 Z160 QS13	300 2/2/3 QS13	205	13	0.43	0.5
C9 33x2x4 Z160 QS13	300 2/2/4 QS13	272	18	0.51	0.5

Standard bobbin weight : 1kg.

with a slight internal modification to adapt to quartz material *Lbf = 2.25 x daN

STORAGE

Quartzel[®] sewing thread properties are guaranteed respectively for 24 months (dry) and 36 months (PTFE coated) when properly stored indoors, protected from direct sunlight exposure and in its original packaging. Store preferably at less than 35°C, avoiding humidity consistently higher than 80%.

Dual-use disclaimer: Quartzel[®] products are all classified as a dual-use commodity by the European and US authorities. Therefore, an export license is required to export these goods to some countries. Our team will support you in this process.

The information given in this data sheet is believed to be accurate and reliable. However it is the users responsibility to determine whether the material is suitable for their particular application, process and/or environment. This data sheet may be modified without prior notice. Quartzel[®] is a registered trademark of Saint-Gobain Quartz S.A.S. Version SW-A4-EN-06/20 - All rights reserved

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