

E6-CK Glass Fiber

Best Corrosion Resistance Solution for High-Performance Composite Materials



Boron-Free Fluorine-Free Glass Fiber



Company Profile

China Jushi specializes in the production of glass fiber. The company has attained the leadership position in the global glass fiber industry in terms of Output, Technology, R&D, Quality and Market share.

- Used the brand name to expand market share,
- Emphasize management to improve efficiency and
- Employ talented people to enable future growth".

The company owns proprietary, world-class core technologies for large E-glass fiber furnaces, C-glass fiber furnaces and clean production recycling furnaces. The company has its own core technology of world-class and achieved certifications to ISO9001, ISO14001, ISO18001, ISO12001 and ISO17025. Its testing center has been certified by both China National Accreditation Board for Laboratories (CNAS) and Germanischer Lloyd (GL). The glass fiber

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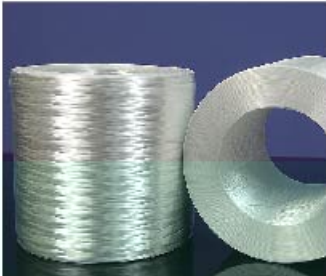
GOALS

1. Develop a world-class production system
2. Develop a world-class management system



E6-CR GLASS FIBER

Excellent Corrosion
Resistance

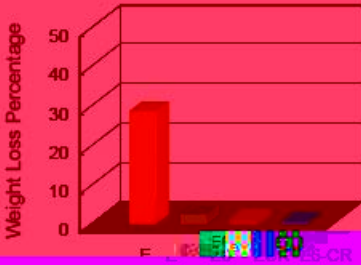


Compared with typical E, E6[®], ECR and E6-CR offers the following unique benefits:

- Higher chemical stability
- Boron-free fluorine-free, to ensure clean production

E6-CR glass fiber is produced with a unique glass formulation, providing significant improvement in chemical corrosion resistance in neutral, acidic or alkaline solutions. The improvement in corrosion resistance is especially significant in the acidic environments. **E6-CR** is therefore particularly suitable for the applications in corrosive environments.

Weight loss comparison of E, E6[®], ECR and E6-CR glass fibers soaking in 10% HCl solution at 96°C after 24 hours



Item	Testing method	E	ECR	E6 [®]	E6-CR
Weight loss in acidic solution	Soaking in 10%HCl solution at 23°C for 24 hours	18.43%	0.22%	0.08%	0.06%
	Soaking in 0.025M Na2CO3 at 23°C for 24 hours	0.34%	0.25%	0.24%	0.18%
Weight loss in alkaline solution	Soaking in 0.5M NaOH solution at 23°C for 24 hours	0.66%	0.45%	0.43%	0.40%
	Boiling in water at 100°C for 24 hours	0.61%	0.31%	0.39%	0.23%

Note: The above data is for reference only.

E6-CR REINFORCEMENTS

Excellent Environment Durability

In the future, end-use composite products will operate in even harsher environments and the end-users will expect enhanced durability. Compared with E6®glass fiber, **E6-CR enhanced glass fiber** reinforced composite materials offer better corrosion resistance and temperature endurance, making composite parts more reliable and cost effective.

Superior Mechanical Properties

Test Sample	Property	Standard	E	E6®	E6-CR
Tensile property of impregnated roving, Epoxy resin	Tensile strength (MPa)	ASTM D2343	1900~2000	2500~2700	2500~2700
	Tensile modulus (MPa)	ASTM D2343	73~75	81~83	81~84
1200 g/m ² UD fabric, (tested in 0° direction), Infusion process, Epoxy resin	Tensile strength (MPa)	ISO 527-5	/	1120.6	1125.0
	Tensile modulus (MPa)	ISO 527-5	/	42.6	42.9
	Fiber Volume Content (%)	ISO 1172	/	53.6	54.0
	Tensile strength (MPa)	ISO 14126	/	805.5	810.5
	ensile modulus (GPa)	ISO 14126	/	42.9	43.1
	Fiber Volume Content (%)	ISO 1172	/	54.3	54.4

Chemical Stability

Degradation (% Loss) after boiling in water for 7 days

Sample	Property	Standard	E6®	E6-CR
800g/m ² woven roving Unsaturated polyester Hand laid laminates	Glass content (%)	ISO 1172	57	57
	Tensile strength (MPa)	GB/T 1447	38.1%	11.4%
	Tensile modulus (GPa)	GB/T 1447	2.8%	1.9%
	Flexural strength (MPa)	GB/T 1449	29.5%	22.3%
	Flexural modulus (GPa)	GB/T 1449	14.5%	13.5%

It can effectively resist the corrosion of acid, alkali, salt water, etc., and will not reduce the strength and thus shorten the operating life of composite materials.

The composite samples tested below were dried for 10 days at 160℃ and then put in an -50℃ environment for another 10 days. The relative loss of properties after the exposure is shown in the table below.



ENVIRONMENTAL PROTECTION

Become a Model for Clean Production

China Jushi is committed to improving our environmental footprint. We have invested heavily in the most modern technologies available to reduce pollutant emissions into our environment. Improved oxygen firing technology reduced total waste gas emissions from the furnace by 80% and the nitrogen oxide emissions by over 90%. State of the art glass recycling technology ensures zero discharge of process waste glass fiber. Modern waste purification technology enables zero discharge of industrial waste water from our production process. E6-CR glass fiber is produced by more scientific production technology and process which not only improve the product performances, but also control air pollutants at source. The development of E6-CR glass fiber is consistent with our constant commitment to social...

responsibility and sustainability. Not only have we achieved the goal of improving our glass fiber products, but we also have improved our environmental footprint at the same time.





CUSTOMER AND TECHNICAL SUPPORT ORGANIZATION

Offer Best Technical Support

China Jushi possesses world class core technologies and advanced testing and analysis capabilities for glass, organic chemistry, fiberglass and composites. We have established a global network of marketing and technical support.





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