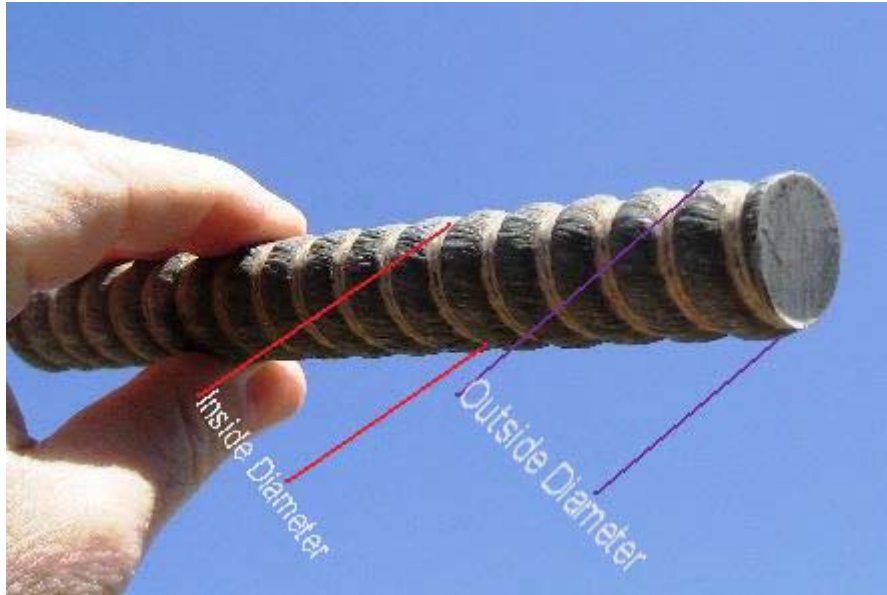




# Lance Brown Import-Export

51A Harrison Street • Balcatta 6021 • AUSTRALIA  
Tel +614 1893 4827 • Fax +618 9349 9255 • Home +618 9349 5064  
mail@LBIE.com • www.LBIE.com  
Australian Business Number 47 243 059 295  
Composite Materials: Minimum Price – Maximum Service

## Basalt Rebar



Above – Basalt rebar for concrete reinforcement [see specifications]

### Brief Introduction to Basalt products

Basalt fiber is similar to carbon fiber and fiberglass, but basalt has better mechanical properties than fiberglass and is lower in cost than carbon fiber. It is used in fireproof textiles in the aerospace and automotive industries and also used as a composite to produce a wide range of products including Basalt Rebar.

- ✓ Has a green environment-friendly performance
- ✓ Alkali and radiation resistant
- ✓ Fire-resistant and high-strength
- ✓ Like fiberglass many products are made including yarn, mesh, geo-grid, roving, cloth, composite bar, chopped fiber, unidirectional cloth, fabrics, needled mats, Basalt Rebars, etc.

### Comparison Between Basalt Fiber and Other Fibers

Item	Basalt fiber	E-glass Fiber	C-glass Fiber	Carbon Fiber	Aramid Fiber
Density (g/cm <sup>3</sup> )	2.65	2.54 - 2.57	12.54	1.78	1.45
Tensile strength (MPa)	3800 -4800	3100 -3800	4020- 4650	3500 - 6000	2900 - 3430
Elastic modulus (Gpa)	93.1 - 110	72.5 - 75.5	83 - 86	230 -600	70 - 140
Break elongation (%)	3.1	4.7	5.3	1.5 - 2.0	2.8 - 3.6
Maximum temperature (°C)	650	380	300	500	250

## Main Technical Index of Basalt Fiber

Performances	Numerical value
<b>Hot physical index</b>	
Temperature range(°C)	- 269 to +650
Softening temperature (°C)	+1050
Transmit heat coefficient (w / m .k)	0.03 – 0.038
<b>Tensile strength retain ability (%) after heat treatment</b>	
20°C	100
200°C	95
400°C	82
<b>Chemical stability (weight loss % on 3 hours boiling)</b>	
2N HCl	2.2
2N NaOH	6.0
H2O	0.2

## Specifications for Basalt Rebars

Nominal Diameter (mm)		Nominal Cross Section Area	Maximum Tensile Strength	Safe Tensile Strength	Modulus	Elongation at Break (mini value)	Weight Per Meter
Outside diameter	Inside diameter	Mm2	Mpa	Mpa	Gpa	%	(g/m)
4							25
6		28.27					56
8	7.7	50.27	1100	1000	50	2.5	100
10	9.6	78.54	1000	950	50	2.5	158
12	11.5	113.1	950	900	50	2.5	227
16	15.4	201.1	900	850	50	2.5	405
19	18.5	295.50	850	800	50	2.5	592
22	21.6	382.73	800	750	50	2.5	768
25	24.5	537.90	760	700	50	2.5	1076
26	28.4	645.90	700	650	50	2.5	1292
32	31.6	807.34	700	650	50	2.5	1615

- Basalt Rebars are available in straight bars and hook and bent shapes (mold fee applies)