



ANCHORING CEMENT GROUTS.



EST. 2003

WE HAVE MANUFACTURED FB400 SINCE 2003

Minova have been committed to global research and development since the mid 1980's. Our FB400 range of grouts are ideal for top down grouting and consolidation.



WHAT IS FB400?

Anchoring grout used for top down grouting and grouting of long tendons

3 variants: FB400, FB400C, FB400+



Free flowing blended cementitious powder

Pumpable to 50m or 100m depending on chosen variant

WHY FB400?

FB400 is a free-flowing blended cementitious powder used for top-down grouting, grouting of long tendons and consolidation.



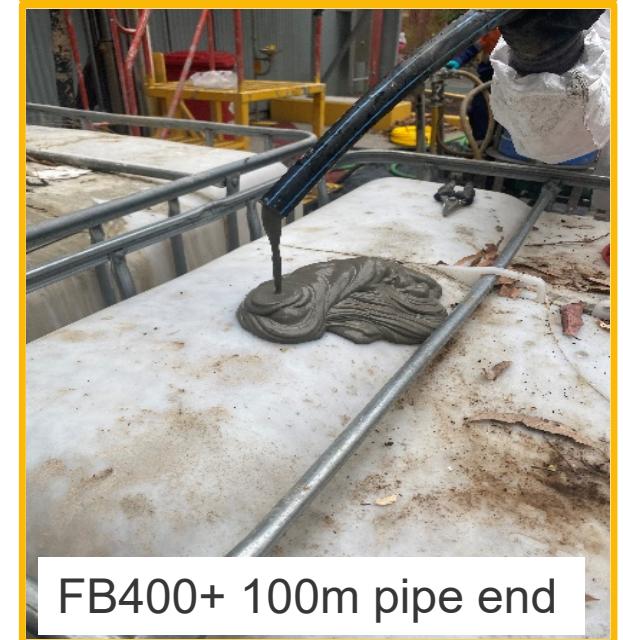
- ▶ Thixotropic grout used to consolidate badly broken ground
- ▶ High early strength, reduces the likelihood of bed separation or slippage of strata
- ▶ Non shrink, unique expansion system compensates for plastic shrinkage
- ▶ Excellent pumpability
 - FB400 and FB400C pumpable to 50m
 - FB400+ pumpable to 100m
- ▶ Supplied in 20 KG bags packed on wooden pallets. 60 bags per pallet
- ▶ Standard FB400 also available if 15 KG bags
- ▶ Shelf life of 12 months
- ▶ ISO 9001:2015 Quality Management Certified
- ▶ 3-part quality control program including raw material, in-process and finished product testing
- ▶ Technical advisory service

THE NEW FB400+

FB400+ has all the same properties of our industry proven FB400.
The key benefit of FB400+ is pumpable to **100m**.

Typical rates of compressive strength development for 20kg of grout with 6 L of water is shown as:

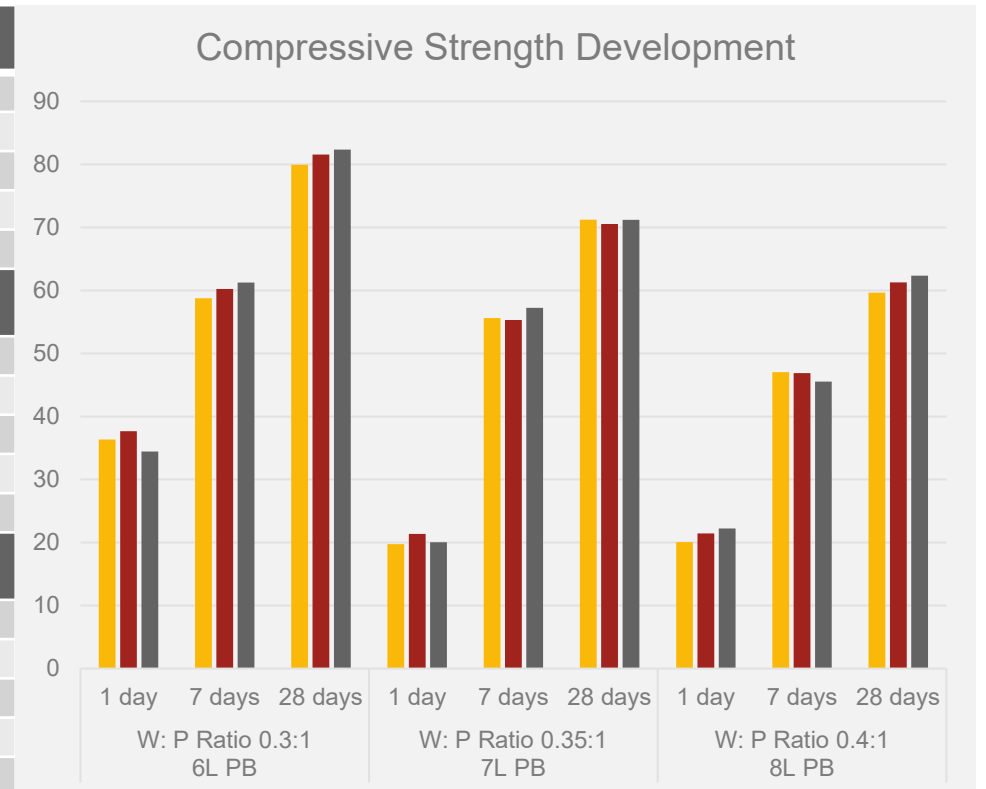
1 Day	7 Days	28 Days
36 MPa	60 MPa	81 MPa



PERFORMANCE DATA.

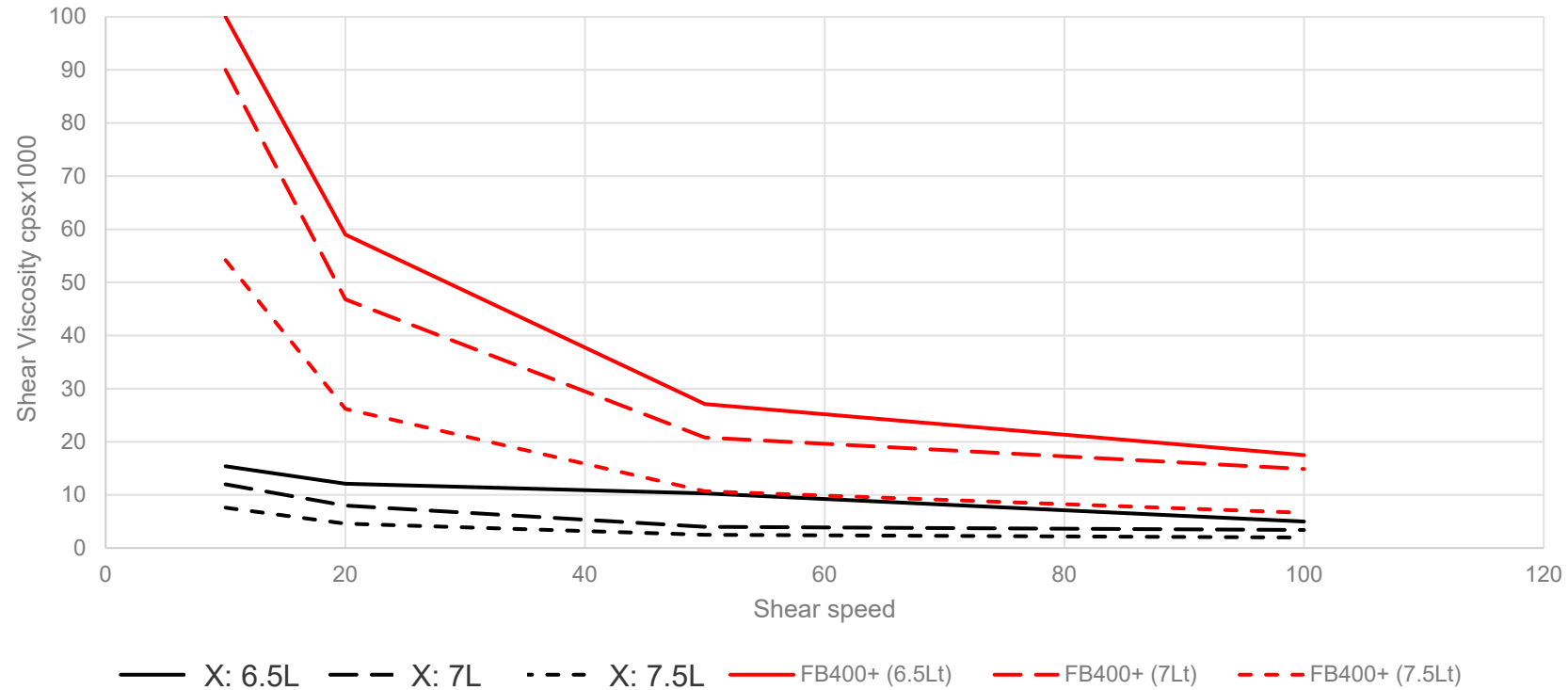
Grout strength development is dependent on the amount of mixing water, ambient temperature, age and curing.

W:P ratio	Slump cm	24hrs UCS		7 Days		28 Days	
0.3:1 6lt PB	13	Density	MPa	Density	MPa	Density	MPa
		1. 1.97	36.35	1.95	58.76	1.94	79.95
		2. 1.95	37.67	1.94	60.23	1.66	81.56
		3. 1.96	34.45	1.95	61.25	1.97	82.35
		Av	36.15		60.08		81.28
W:P ratio		24hrs UCS		7 Days		28 Days	
0.35:1 7lt PB	13	Density	MPa	Density	MPa	Density	MPa
		4. 1.90	19.75	1.91	55.62	1.92	71.23
		5. 1.91	21.37	1.90	55.3	1.91	70.54
		6. 1.90	20.05	1.90	57.23	1.91	71.21
		Av	20.54		56.05		71
W:P ratio		24hrs UCS		7 Days		28 Days	
0.4:1 8lt PB	16	Density	MPa	Density	MPa	Density	MPa
		1. 1.80	20.08	1.90	47.04	1.89	59.65
		2. 1.82	21.45	1.89	46.89	1.90	61.28
		3. 1.82	22.22	1.85	45.53	1.91	62.35
		Av	21.35		46.46		61.09



VISCOSITY DATA.

Product X versus FB400+
Various Water Ratios Viscosity data



WHY CHOOSE MINOVA?



Proven history in the market



Enhancement of safety for workers



Global leader in ground support



Timely & effective product applications



ISO Quality standards



Complete product portfolio



Technical support & expertise



Preferred by Major Global Mining Companies