

Description

UltraTech **POWERGROUT NS2** is a cement-based, non-shrink, non-expanding, polymer enriched, high performance, high early strength and high quality binder for precision grouting applications. **POWERGROUT NS2** is developed by using special polymers, additives and selected fillers.

Variants

POWERGROUT NS2 FLOWABLE
POWERGROUT NS2 NORMAL

Specification

Technical Parameters complies with the following Standards: **ASTM C1107, ASTM 190, ASTM C 940, ASTM C 469, ASTM C 348, IS 4031, IS 2770, IS 5816.**

Features & Benefits

- Ready-to-mix single component system, no hassles of mixing the ingredients
- Excellent bond strength
- Non-shrink, Non-expandable grout
- Economical with graded coarse aggregates for higher volume applications
- Subsequent usage time in 24 hours
- Ultimate compressive strength
- Consistent in quality
- Enhanced flow properties and pot life
- Self-compacting in nature
- No bleeding and better consistency

Areas of Application

UltraTech **POWERGROUT NS2** is recommended for grouting with design strength of 80 MPa for foundation base plates, machine foundations and beds, which demand high strength for micro piles and pile caps, shear wall bond beams, for fixing and anchoring the precast elements, for manufacturing of high strength pavers and blocks.

METHOD OF APPLICATION

Surface Preparation



- Prepare the surfaces before the application of UltraTech **POWERGROUT NS2** by removing oil, bond inhibiting agents, dirt, dust and laitance with suitable methods like by using wire brush, water jetting, mopping, etc.
- Proper checking of reinforcement and other elements to be grouted need to be carried out as per the structural requirements before placing UltraTech **POWERGROUT NS2**. The shuttering has to be proper without any gaps or loose materials to ensure nil leakages during the usage of UltraTech **POWERGROUT NS2**
- Appropriate anti-corrosion and bonding agents to be applied over the old and renewed reinforcement bars and metal areas and over old-new concrete joints before grouting

Mixing



- UltraTech **POWERGROUT NS2** requires 14-15 % of water by weight of material
- Add UltraTech **POWERGROUT NS2** to the measured quantity of water with constant stirring using a mechanical mixing device. Mix to a thick lump-free consistency
- Allow to stand for 2 minutes for the mix to mature and then remix to use. Do not add any extra water to alter the mix consistency or to extend the pot life
- Further water additions will hamper the strength and adhesion properties of UltraTech **POWERGROUT NS2**
- Addition of upto 12 mm down well graded aggregate in 1:0.5 ratio by weight can be done as per the site requirement
- For specific high volume applications addition upto 20 mm down well graded aggregates can also be used at 1:0.5 ratio

Application



- Use the mixed UltraTech **POWERGROUT NS2** to the prepared substrate using the appropriate pouring technique
- UltraTech **POWERGROUT NS2** should not be vibrated with any mechanical vibrators as it is self-compacting by itself
- Any external vibrations will segregate the mix and there are chances of changes in the product performance from the designed properties
- Curing is required only for extreme climatic condition of application

TECHNICAL DATA AS PER RELEVANT IS AND ASTM STANDARDS

Wet density	2250-2350 Kg/m ³
Max size of aggregates suggested along with UltraTech POWERGROUT NS2	Well graded upto 20 mm
Flowable consistency water ratio (IS 516 - 1959)	14-15% without coarse aggregates 9-10% with coarse aggregates
Percentage of coarse aggregates which can be blended (1:0.5)	1/2 part of well graded upto 12 mm coarse aggregate and 1 part of POWERGROUT-NS2 by weight
Type of mixing	Mechanical mixing
Subsequent usage time	24 hours
Expansion % (ASTM C 940)	Nil
Abrasion resistance mm (IS 1237)	0.40
Rapid chloride penetration value (ASTM 1202 - 03)	Moderate
Bleeding % (ASTM C 940)	Nil
Chloride content	Nil
Pot life	60 minutes
Yield per 40 Kg bag @ 15% w/p ratio	19-20 L
Flexural Strength @ 28 days MPa (ASTM C 348)	10-11
Linear co-efficient of Thermal expansion mm/mm/Deg C (ASTM C 531)	1 to 2x10 ⁻⁶
Modulus of Elasticity GPa (ASTM C 469)	35-40
Pull Out Bond Strength MPa @ 28 days (IS 2770)	6-7
Moh's Hardness No. (IS 13630 Part 13)	6-7
Tensile Strength @ 28 days MPa (ASTM 190)	5.5
Split Tensile Strength MPa @ 28 days (IS 5816-1999)	4

Table for Compressive Strength MPa @16% w/p

Test Method	ASTM Method	IS Method
Cube Size	50 mm	70.6 mm
1 day	30-35	25-30
3 days	40-45	35-40
7 days	60-65	55-60
28 days	Up to 80	Up to 80

Note

- Allow a minimum of 24 hours for the subsequent usage. Do not use if temperature is likely to drop to below 5°C or exceed 50°C. For temperature below 20°C allow UltraTech POWERGROUT NS2 to cure for an extended period of time. The technical data provided in this technical data sheet is
- as per our internal lab testing and may vary as per the actual method of application at sites
- Consult UltraTech Building Products Division Technical Services Cell for any further technical assistance

Safety Directions

- UltraTech POWERGROUT NS2 is non-toxic. Use of gloves and goggles recommended. Any splashes to the skin or eyes should be washed off with clean water immediately
- In case of prolonged irritation, medical advice should be sought. UltraTech POWERGROUT NS2 is non-flammable

Packaging

40 Kg

Shelf Life

- UltraTech POWERGROUT NS2 has a shelf life of 6 months from the date of manufacture. Store at a cool and dry place

Other Product Categories available with UltraTech Building Products Division

- Tile Adhesives
- Micro Concrete and Repair Mortar
- Waterproofing and Injection Grouting Material
- Plasters and Jointing Mortar
- Floor Screeds & Masonry
- Autoclaved Aerated Lightweight Concrete Blocks

DISCLAIMER

Information provided on this data sheet is the guideline for usage. Users are advised to undertake a trial for product suitability prior to its full scale usage. There is no implied guaranty/warranty for the results and the company is not liable for any consequential damages.

UltraTech
BUILDING PRODUCTS

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