## TARGET® PORTLAND EXPANDING (Non Shrink) GROUT

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### **PRODUCT**

TARGET® Portland Expanding Non-Shrink Grout is a hydraulic, cement-based, non-metallic aggregate Structural Grout with an extended working time. For use in normal working temperature ranges of 5 °C to 30 °C (41 °F to 86 °F). The grout will have a slight expansion prior to final set and is designed for use at dry pack, plastic, flowable or fluid consistencies. It also contains other admixtures to give non-shrink properties after final set has occurred to meet the requirements of ASTM 1107; Grade C, and US Corps of Engineers Specification CRD-C621. The grout contains no chlorides or other admixtures which could aggravate corrosion of reinforcing steel or pre-stressing steel cables.



On request, this product can be manufactured using Type V (Type 50) Portland cement for applications requiring improved sulphate resistance.

### TYPICAL PROPERTIES OF PORTLAND EXPANDING GROUT

PHYSICAL PROPERTY		MIX CONSISTENCY			
	USA	Fluid	Flowable	Plastic	Dry-Pack
WATER DEMAND, kg/kg liters/25 kg bag US gal/55 lb bag	- - -	0.25 6.25 1.65	0.225 5.63 1.49	0.205 5.13 1.36	0.140 3.50 0.92
FLOW CONE (time) sec Flow Table (Spread) %	ASTM C939 ASTM C827	24	- 135	- 95	- Forms a ball
<b>EXPANSION</b> , % volume Before final set	ASTM C940	1.70	1.98	2.01	N/A
After final set at 3 days at 14 days at 28 days	ASTM C1090 or CRD-C621	0.03 0.03 0.06	0.01 0.04 0.06	0.01 0.03 0.06	N/A
COMPRESSIVE STRENGTH, MPa (psi) at 24 hrs at 3 days at 7 days at 28 days	ASTM C109 ASTM C942	9.7(1,410) 25.2(3,650) 36.4(5,280) 48.8(7,080)	17.0(2,460) 28.7(4,160) 41.5(6,020) 53.9(7,820)	22.0(3,190) 48.0(6,960) 52.3(7,580) 60.5(8,770)	46.1(6,680) 72.9(10,570) 79.4(11,510) 91.1(13,200)
<b>DENSITY</b> kg/m <sup>3</sup> lb/ft <sup>3</sup>	ASTM C138	2,067 128.7	2,115 131.7	2,131 132.7	2,275 141.7
YIELD bags/m <sup>3</sup> bags/yd <sup>3</sup> ft <sup>3</sup> /bag		66 51 0.53	69 53 0.51	70 54 0.50	78 60 0.45



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#### COLOR

Similar to concrete.

#### **USES**

TARGET Portland Expanding Non-Shrink Grout is designed for use in applications where a Structural Non-shrink grout is required, such as the following:

- Grouting under structural columns, base plates, sole plates, machinery and Bearing pads.
- Anywhere a non-shrink structural grout is required for maximum effective bearing for optimum load transfer such as keyways or bearing pads in bridge structures.
- Within or under load bearing Masonry structures.
- · Repairs to concrete structures.
- Permanently anchoring posts, signs, parking meters, railings, columns and other fixtures in concrete, rock or masonry.

## **PROCEDURES**

## **Surface Preparation**

- 1. Remove all laitance, loose material, grease, oil and other contaminants from surfaces that will be in contact with the grout. Water blast or sandblast if necessary.
- 2. Saturate the substrate with clean water for 24 hours prior to grouting. Just before grouting, remove all excess water and allow the substrate to become saturated surfacedry or surface-damp when the grout is placed.

#### **MIXING**

1. Add the grout to clean water with continuous mixing to achieve the required consistency. Approximate water requirements are:

**Dry Pack** - 3.25 to 3.5 L/25 kg bag, or 0.86 to 0.92 US gal/55 lb bag

Plastic - 5.13 L/25 kg bag, or 1.36 US gal/55 lb bag
Flowable - 5.63 L/25 kg bag, or 1.49 US gal/55 lb bag
Fluid - 6.25 L/25 kg bag, or 1.65 US gal/55 lb bag

**IMPORTANT**: Do not exceed 6.5L or 1.7 US gallons of water per 55 lb bag of grout. The temperature of the mixed grout should be 10 °C to 25 °C (50 °F to 77 °F).

- 2. For plastic or flowable consistencies, the grout is best mixed in a high speed shear mixer such as a Jiffler mixer or grout mixer. DO NOT use a rotating drum mixer. For dry pack consistency, use a mortar mixer or equivalent.
- 3. Mix continuously for a minimum of 3 minutes before use, and continue mixing during placement. Commence grout placing within 30 minutes of the start of mixing.
- 4. Placing should be completed within 1 hour of mixing. Discard any grout that is not placed within 1 hour of the start of mixing.
- 5. Maintain base plate, substrate and grout temperatures in the range of 5 °C to 35 °C (41 °F to 95 °F) for at least 72 hours after grouting. Exposed grout surfaces should be kept moist for at least 3 days after grouting. Alternatively, the use of curing compounds meeting the requirements of ASTM C309 are permitted after 24 hours of moist curing in situations where the ambient and grout temperatures do not exceed 25 °C (77 °F).



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#### **CAUTION**

- Base plates or machinery should be firmly bolted down to confine the grout vertically during placement and use.
- Pours with *least* dimensions (thickness) in excess of 6 inches are not recommended. For pours with the least dimension greater than 6 inches, use TARGET Flowcrete. Minimum pour thickness is 1/4".
- The ideal ambient temperature for grouting is between 5 °C to 30 °C (41 °F to 86 °F).
   Cooler temperatures will retard the rate of strength gain, especially in flowable or fluid mixes. Foundation and bedplate temperatures should be kept above 5 °C (41 °F) and below 30 °C (86 °F) for at least 72 hours after grouting.

#### **PACKAGING**

TARGET Portland Expanding Grout is available in 25 kg (55 lb) bag 56 bags per pallet or in 1360 kg (3000 lb) bulk bags 1 per pallet.

