

# MasterCoat 330

Heavy duty high strength iron aggregate topping

## Material Description

**MasterCoat 330** is an iron aggregate topping designed to provide industrial floors with extra heavy-duty protection against abrasion and impact. Applied over prepared hardened concrete it gives significantly longer service life than either normal high strength concrete or natural aggregate toppings.

**MasterCoat 330** has a lower modulus of elasticity than other toppings of equivalent compressive strength which increases impact resistance and total energy absorbing capacity (toughness).

## Areas of Application

- Areas subject to heavy abrasive traffic, impact and continuous wear, such as loading docks, aisles, waste transfer facilities, truck or tractor repair areas, and mill scale sluiceways
- Areas where safety authorities have deemed other floor surfaces hazardous because of excessive wear such as dangerously buckled steel plates, etc
- Mining workshops with tracked vehicles
- Floors with scraper blades in constant contact

**MasterCoat 330** is not recommended for areas where steel plate has worn through in less than one year, or where the floor surface is exposed to chemicals that would affect a concrete floor. For applications under these service conditions Ucrete may be a better option

## Characteristics & Benefits

- Ease of application – extended working life at screedable consistency (130 to 180mm slump) allows ample time to place, float and finish. Rotary compactors are not required.
- Heavy duty, durable industrial floor topping – formulated to be applied at a thickness of 13 to 40mm. Thickness chosen depends on project requirements, including design traffic loading, abrasion, impact and chemical resistance. Refer to the **MasterCoat 330** Application Guide for more information.
- High abrasion resistance – eight times more wear resistance than plain concrete.

- Greater toughness – energy absorbing capacity is significantly greater than normal high strength concrete or natural aggregate toppings.
- Increased impact resistance – four times greater than plain concrete.
- High density surface – resists oil and grease penetration, reduces dusting and absorption.
- Protects against joint deterioration – iron armouring eliminates the risk of dangerous protruding or buckled joints from steel tiles, minimises damage to production goods and increases the life of materials handling equipment.

## Properties

### Compressive Strength

Typical compressive strengths for 50mm cubes, cured at 21 °C, mixed to the recommended consistency using 2.0 litres of water per 20kg bag.

Age	MPa
24 hours	47
3 days	60
7 days	68
28 days	88

Reasonable variations from the results shown here may be experienced as a result of jobsite conditions. Mix an entire bag of **MasterCoat 330** when preparing cubes for strength tests.

<b>Abrasion Resistance</b> (ASTM C779)	0.20mm at 60 minutes (33MPa concrete more than 1.4mm at 60 minutes)
<b>Impact resistance</b> (LA Rattler)	30% weight Loss (33MPa concrete has 70% loss of weight)

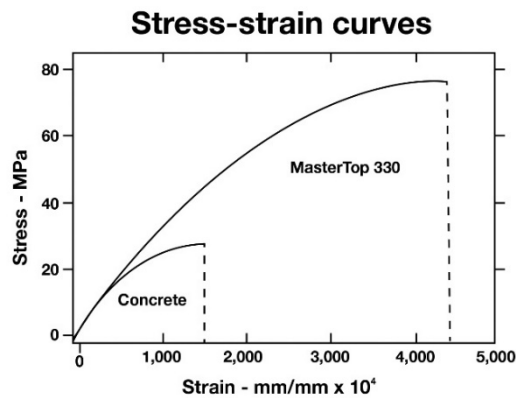
See Technical Sheet 22 for explanation of abrasion and impact tests and how they relate to long-term durability of the floor.

### Stress-Strain Tests

Typical stress-strain test data comparing the basic material properties of MasterCoat 330 to 28MPa plain concrete, using 76mmx152mm cylinder cured at 21 °C.

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	MasterCoat 330	Plain Concrete
Unit weight, kg/m <sup>3</sup>	3555	2325
Modulus of elasticity, 10 <sup>6</sup> MPa	2.7	3.1
Maximum Strain, mm/mm x 10 <sup>-6</sup>	4450	1620
Toughness, MPa x 10 <sup>-2</sup>	21	3

## Application

Please refer to Application Guide for **MasterCoat 330** for complete application and curing instructions. **MasterCoat 330** is best applied over concrete with a minimum compressive strength of 30MPa.

## Estimating Data

One 20kg bag of **MasterCoat 330** mixed with 2.0L potable water provides approximately 6.2L of screedable topping at 150mm slump.

MasterCoat 330				
L	Thickness in mm /m <sup>2</sup>	m <sup>3</sup>	bags /m <sup>3</sup>	m <sup>2</sup> /mm thickness
6.2	6.2mm	(0.0062)	161	6.2 m <sup>2</sup>

Because the depth of surface preparation may vary from design it is best to overestimate the quantity required by 10-20% for the first stages, until actual usage is established.

## Packaging

**MasterCoat 330** is packaged in 20kg moisture resistant paper bags.

## Storage & Shelf Life

**MasterCoat 330** can be stored in tightly sealed original bags for 12 months if kept dry and at warehouse temperatures.

## Precautions

For the full health and safety hazard information and how to safely handle and use this product, make sure that you obtain a copy of the Safety Data Sheet (SDS) from our office or website.

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## Disclaimer

MasterCoat-330 -ANZ-V2-I 125

### STATEMENT OF RESPONSIBILITY

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