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**MULTI CONSTRUCTION
CHEMICALS**

<http://www.mccc-sa.co.za>

MULTIDURASHAKE 65

**A Natural Aggregate Colour Pigmented Concrete Floor Hardener 2-3 Times
Greater Wear Resistant than Plain Concrete Floors**

Specification Type

ACI Manual of Concrete Practice Part 1. AC 201 and 2 R77 Guide to Durable Concrete, Section 3.4 and 6 recommendations for obtaining abrasion resistant concrete surfaces. BS CP 204 in situ Floor Finishes.

Description

MULTI DURASHAKE 65 a specially graded inert quartz aggregate incorporating light-fast inorganic colouring pigments combined with blended cements, water absorbing agents and other proprietary chemicals The hard wearing quartz aggregate has high abrasion resistant characteristics and is non-oxidizing and chemically inert.

Typical Applications

MULTI DURASHAKE 65 provides one of the hardest wearing non-dusting floor surfaces in the following typical locations / facilities:

- * Engineering Workshops, Abattoirs,
- * Garages, Bakeries,
- * Warehouses, Laboratories,
- * Power Stations, Subways,
- * Loading Bays, Car Parks,
- * Breweries, Refineries,

Desalination Plants, Factories, etc

Advantages

- * MULTI DURASHAKE 65 permanently colours the floor surface.
- * MULTI DURASHAKE 65 is designed to increase the durability and wearing properties of industrial and commercial concrete floors.
- * MULTI DURASHAKE 65 is applied by the dry shake method and is incorporated monolithically onto the concrete surface

Typical Properties

Colour:	Alkali-fast and light fast inorganic colouring pigments in white, terracotta, brown beige , ivory, grey, light reflective, burgandy, yellow, orange, red, green and many other colours
MOH Scale:	7 - 8
Aggregate grading scale:	18
Aggregate impact value:	2.5 times greater than plain concrete flooring
Storage life:	Up to 1 year when stored in accordance with manufacturer's instructions See coverage chart
Coverage: Flashpoint:	Not applicable

Typical Comparative Wear Test Results

Depth of Wear (Thickness Loss) (mm)

Sample Reference (minutes)	Control Average	MULTI DURASHAKE 65 Average
5	0.36	0.13
10	0.67	0.26
15	0.79	0.34
20	0.96	0.39
25	1.18	0.50
30	1.34	0.61
35	1.58	0.73

Weight Loss (gm)

Sample Reference (minutes)	Control Average	MULTI DURASHAKE 65 Average
5	2.9	1.4
10	5.8	2.7
15	7.6	3.7
20	9.9	4.8
25	11.9	5.7
30	14.6	6.4
35	16.7	7.8

Test results shown above indicate that MULTI DURASHAKE 65 significantly reduces the depth of wear. Tests were undertaken using a dorry abrasion machine.

Directions for Use

Base concrete

The base concrete should be designed to a minimum of 25 MPa - 30 MPa with +65mm slump

Method of Application. Dry Shake (Method: Base Concrete):

Place concrete and strike off to the specified level. Level and consolidate with wood float, bull float or power trowel with the blades flat. If bleeding occurs, remove all bleed water from surface prior to application. Hand or machine floating

Application

The MULTI DURASHAKE 65 should be applied when the concrete is sufficiently firm to take the weight of both workman and power float leaving foot prints no greater than 3mm in depth. It is essential that no free standing water is evident. Do not delay application when this point has been reached.

Apply 2 /3 of the first shake and carry out the First power or hand trowel operation Repeat the operation with the remaining 1 /3 at right angles to the first. Ensure that the first stage is completely trowelled - in before continuing with the second stage

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When the sheen begins to leave the surface, carry out power trowelling to close the pores and completely level the surface. Initially the power float blades should be set flat or at a slight angle and as the surface continues to stiffen, the angle of the blades should be increased. Do not over trowel.

Stripping and Sealing

This is an optional procedure and should specification require, refer to Mufti Floorcoat 1060 Technical Data Sheet.

Coverage

Dry Shake Method: The following table details the coverage rate of the MULTI DURASHAKE 65.

Floor Specification:	Dry shake Application
Minimum Application:	7kg / m ²
Heavy Duty	8-10kg / m ²

Curing should be carried out immediately the final trowelling operation has been completed with MULTICURE 200 Concrete Curing Compound. Protect all surfaces from traffic until the surface has gained full strength.

Joints: Saw Cut joints should be cut at + 5mm wide and 25% in depth to the surface bed thickness. These joints should be cleaned immediately with water and compressed air and left open for at least 28 days before sealing. Cuts should be made as soon as is practically possible without spalling the cut joint. Seal joints with MULTISEAL Polyurethane Joint Sealant in gun or pour grade.

Watch points

- * Maximum concrete slump should be 75 mm.
- * Do not apply over concrete containing calcium chloride or where concrete contains more than 3% entrained air.
- * Do not cure with salt water or brackish water.
- * Never apply over bleed water
- * Be aware of concrete susceptible to delayed bleeding.
- * Do not apply over concrete containing unrefined lignosulphonated admixtures.
- * Always cure as soon as possible with MULTI CURE 200 Curing Compound

Note: Factors affecting the final appearance of a coloured floor are:

- * Poor workmanship.
- * Over/ under trowelling.
- * Contamination of floor surface when trowelling and finishing. Not curing. Do not over-apply curing compound as this will affect the final appearance of the floor surface.
- * Failure to protect the floor surface from contamination or physical damage.
- * Delamination.

Pointers to prevent such problems arising - follow these suggested procedures:

- * Follow manufacturer's instructions and specifications.
- * Barricade the area where floor is being cast.
- * Alert other trades working in the area to guard against sliding heavy loads across floor causing physical damage, spilling oil, grease, paint and mortar etcetera.
- * During final trowelling do not burnish trowel — use hand trowels
Do not add water to the coloured floor surface for finishing purposes.
Make sure trowels, floats, power floats, knee boards and shoes are kept clean and free from dirt and fresh concrete
Do small areas per cast in order to achieve desired colour and texture finish

Packaging

Supplied in 25kg double-lined resistant bags

Specification Clause

MULTI DURASHAKE 65 colour pigmented abrasion resistant non-oxidising quartz aggregate concrete floor hardener as manufactured by MULTI CONSTRUCTION CHEMICALS (PTY) LTD. Applied to all floor areas indicated at a rate of ...kg / m² all in accordance with the manufacturer's detailed instructions, and cured with MULTI CURE 200 curing compound. After 28 days or just prior to project handover, strip the curing compound with MULTI Thinners 1610 stripper and then seal with MULTI FLOORCOAT 1060 sealer. See MULTI STRIPPING and SEALING Method statement for further details.

Quality Assurance

MULTI CONSTRUCTION CHEMICALS (PTY) LTD's production and testing programmes comply with local and international testing standards. Also complies with ACI Manual of Concrete Practice Part I, ACI 201 and 2. R77 Guide to Durable Concrete 3, 4 and 6, BS CP204 insitu Floor Finishes.

Updates: This data sheet supersedes all previous issues prior to this date: 29/02/2004