



Product Submittal

MasterTop® 100

Natural aggregate surface hardener

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1. Company profile

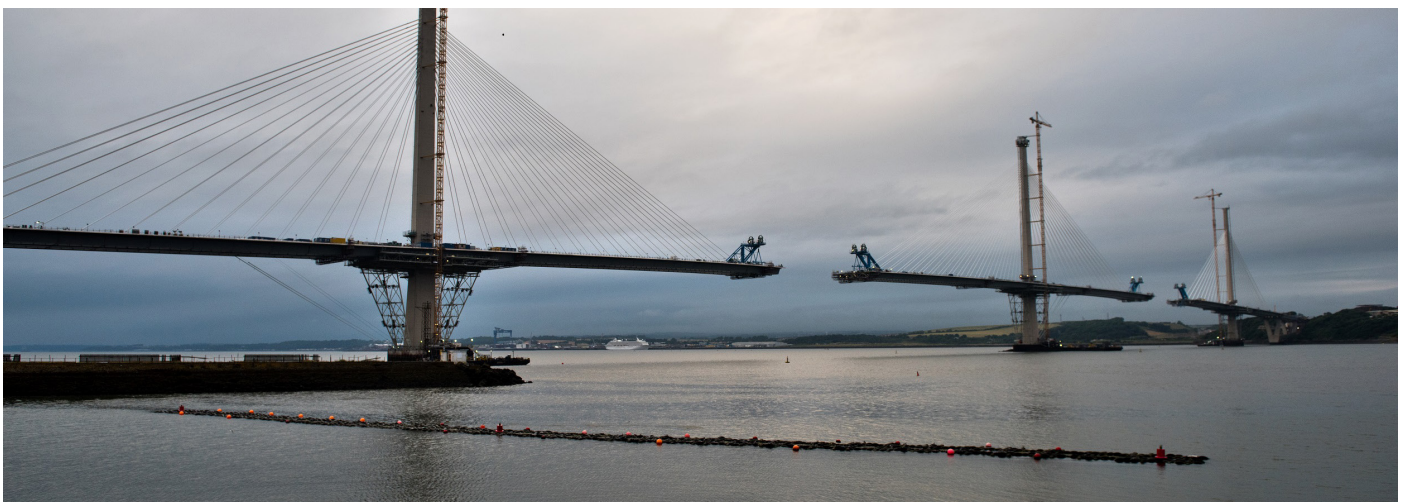
o t M ro p

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Master ers o t o s

Master Builders Solutions is MBCC Group brand of advanced chemical solutions for construction. The Master Builders Solutions brand is built on the experience gained from more than 100 years in the construction industry. The comprehensive portfolio under the Master Builders Solutions brand encompasses lasting solutions for new construction, maintenance, repair and renovation of structures: concrete admixtures, cement additives, chemical solutions for underground construction, waterproofing solutions, sealants, repair & protection solutions, performance grouts, tiling solutions and performance flooring solutions. The Master Builders Solutions brand is backed by a global community of construction experts. To solve our customers' specific construction challenges from conception through to completion a project, we combine our know-how across areas of expertise and regions and draw on the experience gained in countless construction projects worldwide. We leverage global technologies, as well as our in-depth knowledge of local building needs, to develop innovations that help make our customers more successful and drive sustainable construction. For more information please visit www.master-builders-solutions.com/en-ae



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Master Air[®]

Complete Solutions for air entrained concrete

Master Cra[®]

Solutions for strengthening and structural adhesives

Master Cast[®]

Solutions for the manufactured concrete product industry

Master Density[®]

Density reducing admixtures

Master Cement[®]

Solutions for cement manufacture

Master Flow[®]

Solutions for low viscosity concrete

Master Repair[®]

Solutions for concrete repair

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Comprehensive solutions for fiber reinforced concrete

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Solutions for formwork treatment

Master Fire[®]

Passive fire protection system

Master Grout[®]

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Hyperplasticizer formulated from state-of-the-art polymers for the ultimate performance

Master Inject[®]

Solutions for concrete injection

Master Cure[®]

Solutions for concrete curing

Master Dur[®]

Solutions for enhanced durability

MasterMatr[®]

Advanced rheology control solutions

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Master SuperR[®]

Superplasticizer for concrete

MasterRo[®]

Solutions for underground construction

Master Seal[®]

Solutions for waterproofing and sealing

Master Set[®]

Solutions for set control

MasterTiling[®]

Solutions for tiling systems

MasterTop[®]

Solutions for industrial and commercial floors

Master Adhesive[™]

Adhesive Solutions for construction

Master Accelerator[®]

Advanced accelerator solutions for concrete

Master Floor[®]

Flooring solutions for harsh environments

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4. Technical datasheet

MasterTop[®] 100

Natural aggregate surface hardener

DESCRIPTION

MasterTop 100 is a pre-mixed powder designed to be applied as a dry shake over freshly floated concrete floor. **MasterTop 100** creates an aesthetically pleasing, colored floor with significantly improved abrasion resistance. It is based on selected hard wearing mineral aggregates blended with alkali and light fast pigments and hydraulic binders. **MasterTop 100** is available in various standard colours.

RECOMMENDED USES

MasterTop 100 is recommended for treating floor areas not exposed to serious chemical attack and where uniform appearance and enhanced abrasion resistance are desired. Applications include floor areas of:

- Light Industrial and commercial buildings
- Basement and cellars
- Mechanical workshops
- Storage rooms
- Corridors, halls
- Educational institutions
- Parking areas
- Loading platforms

FEATURES AND BENEFITS

- **Uniform and intense colours** - attractive floors. Pleasant working environment.
- **Light and alkali-fast pigments** - durable, non-fading colours.
- **Good abrasion resistance** - minimized maintenance of floor surface
- **Dense surface** - increased resistance to ingress of oil and grease. Easy to clean.

PERFORMANCE DATA

Aspect	Free flowing powder
Hardness on Moh's scale	7 - 8
Abrasion resistance, 1kg H22 wheel (ASTM D 4060 –1000cycles)	< 1000 mg

The performance data is typical and based upon controlled laboratory conditions. Actual performance on the job site may vary from these values based on actual site conditions.

APPLICATION

For information about application, please obtain a copy of the Master Builders Solutions "Application Guide for **MasterTop 100**" from your local representative.

Preparation of the Concrete

Concrete for single course monolithic floors should be capable of achieving a 28 days compressive strength of 25MPa, and with no more than 3% air. Concrete should not contain calcium chloride.

MasterTop 100 is applied as a dry shake over freshly wooden bull floated concrete

ESTIMATING DATA

Consumption of **MasterTop 100** depends upon the traffic conditions expected on the floor. As a guide following consumptions can be considered.

Loading Condition	Consumption
Light Duty	3 Kg/m ²
Medium Duty	4 Kg/m ²
Heavy Duty	5 Kg/m ²

PACKAGING

MasterTop 100 is available in 25kg pack. Available in natural and colours.

SHELF LIFE

MasterTop 100 has a shelf life of 12 months. Store out of direct sunlight, clear of the ground on pallets protected from rainfall.

PRECAUTIONS

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

MasterTop[®] 100

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MAP#MasterTop 100 v2. 12. 2020

**STATEMENT OF
RESPONSIBILITY**

The technical information and application advice given in this Master Builders Solutions publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability, or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

NOTE

Field service where provided does not constitute supervisory responsibility. Suggestions made by Master Builders Solutions either orally or in writing may be followed, modified, or rejected by the owner, engineer or contractor since they, and not Master Builders Solutions, are responsible for carrying out procedures appropriate to a specific application.

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5. Method statement

THIS METHOD STATEMENT COVERS THE PREPARATION AND APPLICATION OF **MasterTop 100**.

METHOD STATEMENT: MasterTop 100

Substrate requirements:

Minimum compressive strength = 30N/mm²

1. SUBSTRATE PREPARATION:

Green concrete

- 1.1. Concrete should have been laid and levelled to correct level to allow for topping of 15-30mm.
- 1.2. Float finish only, to reduce laitance at surface.
- 1.3. Apply a surface retarder at time of casting or use water jetting to green concrete to expose coarse aggregate.
- 1.4. Wet cure concrete until topping is to be laid.
- 1.5. **MasterTop 100** can be laid on green concrete as soon as the concrete is hard enough to take foot traffic without leaving depressions in the surface.
- 1.6. If preparation is being carried out using water jetting, ensure all cement paste and fine aggregate that is disturbed during the process is flushed off the substrate. Failure to do so can lead to bond failure.

2. HARDENED CONCRETE:

- 2.1. Prior to starting general preparation of the area, remove any concrete contamination by oil, grease etc.
- 2.2. Chip off top surface of concrete to expose the coarse aggregate, to give a surface profile with an amplitude of not less than 5mm.
- 2.3. Removing the surface of the concrete should remove all contaminants that could interfere with the bond. If this is not the case, ensure the contaminant is removed by whatever means are required.

3. PRIMING:

- 3.1. Prime old concrete with **MasterBrace ADH 1438** a two-component epoxy bonding agent.
- 3.2. Pour the contents of the B component into the A component and mix together for 2 minutes, using an electric drill fitted with a paint stirrer.
- 3.3. Use a paint roller or stiff broom to apply the mixed material to the substrate.
- 3.4. Allow 30 to 60 minutes induction time following application before applying the topping. Waiting time is dependent on temperature i.e. 60 minutes at 20°C to 30 minutes at 35°C.

- 3.5. Note: A primer is not required to bond **MasterTop 100** to green concrete that is properly prepared, has been kept wet and is not more than the three days old.

4. MIXING:

- 4.1. Use a force action mixer to mix **MasterTop 100**.
- 4.2. Pour the required amount of water into the mixing drum.
- 4.3. While the mixer is turning add the **MasterTop 100** powder.
- 4.4. Mix for 5 minutes. If lumps are present in the mix, continue mixing until they have been dispersed.

5. APPLICATION:

NOTE: At the time of application green concrete should still be damp from the water jetting, but the surface must be free of standing water.

- 5.1. Spread the mixed **MasterTop 100** evenly over the surface.
- 5.2. Strike off to level.
- 5.3. Start the floating operation using wood or power floats as soon as the **MasterTop 100** is firm enough.
- 5.4. When the surface starts to harden, start the first power trowelling operation.
- 5.5. A second power trowelling should be given with the blades at a steeper angle as the surface stiffens.
- 5.6. Power trowelling should continue until the surface is completely closed.
- 5.7. When power trowelling is complete, apply the recommended curing membrane for your particular application.

6. PROTECTION:

- 6.1. The area should be barricaded after the curing compound is applied.
- 6.2. As soon as the curing compound has dried, adequately cover the floor surface to prevent staining, discolouration or physical damage, which may be difficult to correct.
- 6.3. Alert other trades to the need for special protection against rolling or sliding heavy loads across the surface, oil drippings from pipe threaders, spillage of paint, plaster and mortar, acid washing of interior masonry walls, etc.
- 6.4. Ensure that the covering is not damaged during the progress of the job.

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5. Test Reports

ADMATERIALS TECHNOLOGIES PTE LTD

53 Ubi Avenue 1 #01-13 Paya Ubi Industrial Park Singapore 408934 Co. Reg. No.: 200805959C
Tel: (65) 6848 6838 Fax: (65) 6746 0196 Website: www.admaterials.com.sg



TEST REPORT

CLIENT NAME : BASF SOUTH EAST ASIA PTE LTD
ADDRESS : 33 TUAS AVE 11
SINGAPORE 639090

ATTENTION TO : MR. JOSHUA WONG
TEL NO : 6860 7387
FAX NO : 6861 6152

ACCOUNT : BASF SOUTH EAST ASIA PTE LTD
CHARGEABLE TO

PROJECT CODE : D0371
PROJECT TITLE : GENERAL TESTING

SUBJECT : LA RATTLER IMPACT TEST

TEST STANDARDS : MODIFIED ASTM C131 - 03

JOB REF : ADM/12/4997(2)
CLIENT SAMPLE REF. : MASTERTOP 100

DATE RECEIVED : 20-Sep-2012
DATE OF REPORT : 24-Sep-2012

TOTAL PAGES : 2 (INCLUDING COVER PAGE)

Terms & conditions:

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TEST RESULTS:**LA RATTLER IMPACT TEST (MODIFIED ASTM C131 - 03)**

Sample Reference	Mastertop 100	
	Mass (g)	Percentage of Weight Loss
Initial	865.8	0%
After 500 Revolution	714.7	17%
After 1000 Revolution	629.1	27%
After 1500 Revolution	548.5	37%
After 2000 Revolution	470.4	46%

Sample Reference	40 Mpa Mortar (Control)	
	Mass (g)	Percentage of Weight Loss
Initial	812.4	0%
After 500 Revolution	547.1	33%
After 1000 Revolution	373.8	54%
After 1500 Revolution	248.4	69%
After 2000 Revolution	152.1	81%

Remarks: 1. 50mm cubes of the material to be tested are produced, three (3) cubes of each material are used per test.

2. Number of steel balls used: 9

3. Weight of each steel ball: approximately 433g

4. Age of sample: 28 days


Witnessed By: Joshua Wong

PREPARED BY:



ZHOU HUA JUN
Engineer

APPROVED BY:



SHERLY WIJAYA
Laboratory Manager



SIRIM QAS International Sdn.Bhd. (Company No.: 410334-X)
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40911 Shah Alam, Selangor Darul Ehsan, Malaysia
Tel. no: 03- 55445853
Fax. no: 03-55445855

TEST REPORT

REPORT NO : 2007CB1222

PAGE : 1 OF 3

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Applicant : BASF CONSTRUCTION CHEMICAL MALAYSIA SDN. BHD.
8, Jalan Keluli 2,
Kawasan Perindustrian Bukit Raja,
41050 Klang,
Selangor.

Manufacturer : BASF CONSTRUCTION CHEMICAL MALAYSIA SDN. BHD.

Product : Floor Hardener (Mastertop 100)

Reference Standard/
Method of test : 1) BS 6319 : Part 2 : 1983
Testing of resin composition for use in construction
Part 2. Method for measurement of compressive strength
2) ASTM : D 4060 - 2007
Standard Test Method for
Abrasion Resistance of Organic Coatings by the Taber Abraser

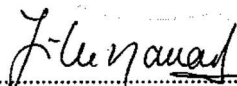
Description of sample : A 25 kg bag of Floor Hardeners (Mastertop 100) was received for testing

Date received : 01/06/2007

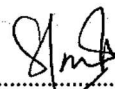
Job no./Ref. no. : J20075040693 / (SQAS/ CBMT/T.REC/CSL/01)

Issued date : 11 SEP 2007

Approved Signatories


(YM RAJA NOR SIHA)
Senior Technical Executive




(SERI BANUN SUJANGI)
Group Leader
Civil and Construction Section
Product Certification, Inspection & Testing Department

TEST REPORT

REPORT NO.: 2007CB1222

PAGE : 2 OF 3

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Test Results:

Submitted by : BASF CONSTRUCTION CHEMICAL MALAYSIA SDN. BHD.
Product : Mastertop 100
Size of the samples : 50 mm x 50 mm x 50 mm
Method of Test : BS 6319 : Part 2 : 1983
Testing of resin composition for use in construction
Part 2. Method for measurement of compressive strength

References	Ages (day)	Compressive Strength (N/mm ²)	Average Compressive Strength (N/mm ²)
1	3	57.0	55.9
2		54.2	
3		56.4	
4	7	59.6	66.7
5		68.7	
6		71.9	
7	28	87.1	87.9
8		81.4	
9		95.2	



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11 SEP 2007

TEST REPORT

REPORT NO.: 2007CB1222

PAGE : 3 OF 3

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Test Result :

Submittor : BASF CONSTRUCTION CHEMICAL MALAYSIA SDN. BHD.
Product : Mastertop 100
Method of Test : ASTM : D 4060 - 2007
Standard Test Method for
Abrasion Resistance of Organic Coatings by the Taber Abraser
Size of Specimen : 100 mm x 100mm x 25 mm

Abrasion Resistance Weight Loss Method

Sample : Mastertop 100

No. of Abrasion Cycles	Weight Loss (g)
250	0.34
500	0.54
750	0.80
1000	1.06



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11 SEP 2007



राष्ट्रीय परीक्षण शाला (प.क्षे.) मुंबई
National Test House (W. R.) Mumbai

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GOVERNMENT OF INDIA
NATIONAL TEST HOUSE
F-10 MIDC, ANDHERI (E), MUMBAI-400 093.
Phone : 022-28327276, 28352350
FAX : 022-28341767
E-mail : nthwr@mtnl.net.in
Website : http://nth.nic.in

TEST CERTIFICATE

Test Certificate No: BTH/PCE/2012/93

Date of Issue: .07.2012

Code No.: 05.10.2012

Page No. 1 of 2 Pages

1. Issued to
(Name and address of the organization)

BASF India Ltd.,
Construction Chemicals Divn.,
Plot No.C-68,MIDC,
Thane Belapur Road,
Turbhe, Navi Mumbai-400613

2. Party's Ref. No.

Letter no. Nil dtd.4/6/2012

3. Description of the test item

Mastertop 100

4. Identification of the test item

Marked as Mastertop 100

5. Date of receipt of test item

4/6/2012

6. Identification of Test Method

I.S. 13630 (Pt-13)/1993



राष्ट्रीय परीक्षण शाला (प.क्षे.) मुंबई
National Test House (W. R.) Mumbai

5527

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BTH/PCE/2012/93

Page 2 of 2 Pages

DATE: 07.2012

05.10.2012

Test Results of Mastertop 100

1) Scratch Hardness of Surface on Mohs Scale : 7

Tested by

(Parneria S.M)
Scientific Officer (Civil)

Checked & Approved by

(Smt. S.A. Kaushil)
Scientist SD

Note

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2. This Test Certificate applies only to sample tested as mentioned in the "PRESS NOTE" shown at Page (v) in the Govt. of India Publication 'Schedule of Testing Charges levied by 'National Test House and related information"



राष्ट्रीय परीक्षण शाला (प.क्षे.) मुंबई
National Test House (W. R.) Mumbai

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GOVERNMENT OF INDIA
NATIONAL TEST HOUSE
F-10 MIDC, ANDHERI (E), MUMBAI-400 093.
Phone : 022-28327276, 28352350
FAX : 022-28341767
E-mail : nthwr@mtnl.net.in
Website : http://nth.nic.in

TEST CERTIFICATE

Test Certificate No: BTH/PCE/2012/94
Date of Issue: .07.2012
Code No.: 05.10.2012
Page No. 1 of 2 Pages

- | | |
|--|--|
| 1. Issued to
(Name and address of the organization) | BASF India Ltd.,
Construction Chemicals Divn.,
Plot No.C-68,MIDC,
Thane Belapur Road,
Turbhe, Navi Mumbai-400613 |
| 2. Party's Ref. No. | Letter no.Nil dtd.4/6/2012 |
| 3. Description of the test item | Mastertop 100E |
| 4. Identification of the test item | Marked as Mastertop 100E |
| 5. Date of receipt of test item | 4/6/2012 |
| 6. Identification of Test Method | I.S. 13630(Pt-13)/1993 |



राष्ट्रीय परीक्षण शाला (प.क्षे.) मुंबई
National Test House (W. R.) Mumbai

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BTH/PCE/2012/94

Page 2 of 2 Pages

DATE: 07.2012

05.10.2012

Test Results of Master top 100E

1) Scratch Hardness Surface on Mohs Scale : 8

Tested by

(Parneria S.M)
Scientific Officer (Civil)

Checked & Approved by

(Smt. S.A. Kaushil)
Scientist SD

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