

MasterProtect[®] H 303 (Formerly known as Masterseal[®] 303)

Alkyl Alkoxysilane Based Water Repellent

DESCRIPTION OF PRODUCT

MasterProtect[®] H 303, is a water-based alkyl alkoxy silane having a volatile organic content lower than 350 grams per litre. It penetrates into the substrate and chemically reacts within the pores of the cementitious substrates.

FIELDS OF APPLICATION

MasterProtect[®] H 303 is a clear penetrating water repellent to protect both vertical and horizontal concrete surfaces exposed to weathering effects and chloride ions.

MasterProtect[®] H 303 can be used on old and new (cured) structures;

- Bridge decks, piers columns and beams.
- Multi-Storey car parks, building facades and balconies.
- Chimneys, cooling towers.
- Concrete pavements and pedestrian ways.
- Airport runways and taxiways.
- Exposed concrete surfaces (e.g. building façades).
- Precast concrete elements.
- Marine structures and jetties.
- Water repellence treatment of; sand – lime brickwork, hard - bake brickwork, küfeki stone, mineral rendering, absorbent natural stones.

FEATURES AND BENEFITS

- Improves the aesthetics by reducing efflorescence, algae growth and dirt build-up.
- Surface appearance remains unchanged.
- Penetrates deep into the concrete
- Prevents water and chloride ion penetration into the concrete and protects it from freezethaw effects.
- Virtually no product evaporates during spray application, therefore more active silane can reach its intended target minimizing wastage and maximizing coverage.
- Ready for use, no dilution on the site, which means constant quality.

TECHNICAL DATA

Property	Standard	Data	Unit
Chemical Base	-	Water based alkyl alkoxysilane	-
Solid Content	-	20	%
Color	-	White (Clear when cured)	-
Density (23°C)	-	1,01	g/cm3
Chloride Diffusion (vs. reference concrete)	-	7	%
Water Absorption Test (vs. reference concrete)	-	5,3-8,3	%
Flash Point	ASTM D 3278-82	>93	Celcius
Water Vapor Transmission Rate	Oklahoma DOT-OHD-L-35	102	%

- Single layer application.
- Can be applied to damp substrates.
- Application equipment and spillages easily cleaned with soapy water.
- Reduces volatile organic emissions into the atmosphere in comparison with today's commonly-used organic solvent-based water repellents.
- Provides a much safer working environment for the applicator by minimizing health hazards associated with organic solvents.
- Breathable, vapour permeable treatment

APPLICATION PROCEDURE

(A) Surface Preparation

New cured concrete surfaces should be cleaned of all sand, surface dust/dirt, oil, grease, chemical films/coatings and other contaminants before application. A complete water-blast, sandblast or shot blast may be needed to achieve the desired surface condition. Crack control, caulking, patching and expansion joint sealants must be installed before the application of **MasterProtect[®] H 303**, and allowed to cure in accordance with the manufacturer's instructions.

(b) Mixing

MasterProtect[®] H 303 is a ready to use product, stir slightly.

(c) Application

Temperature of the surface, the air and the material should be between 5 and 35°C during application. Do not apply **MasterProtect[®] H 303** when temperatures are expected to fall below 5°C within 24 hours or rain is expected within 4 hours of completed application. Surfaces to be treated can be slightly damp, but for best results a dry surface is suggested for maximum penetration.

Test a small area of concrete surface before starting general application of any clear, penetrating sealer to assure desired results and coverage rates.

Apply to saturation, with a controlled rundown of maximum 20 cm on vertical surfaces. Low pressure, non-atomizing

MasterProtect® H 303 (Formerly known as Masterseal® 303)

Alkyl Alkoxysilane Based Water Repellent

flooding is recommended or poured followed by brooming for even distribution on horizontal surfaces.

COVERAGE

0.15 - 0.3 liter/m² (depends on the substrate porosity)

FINISHING AND CLEANING

Equipment and incidental areas of over-spray should immediately be cleaned with soapy water to avoid eventual staining. **MasterProtect® H 303** will leave a visible residue on non-porous materials such as glass, metal and painted surfaces when cured. Dried, polymerized material can be removed by scraping with a metal blade. Protect plant life from over spray.

CURING

It is recommended that any surface treated with **MasterProtect® H 303** be left undisturbed for a minimum of 4 hours in order to allow proper penetration. **MasterProtect® H 303** may leave a temporarily slippery surface for several hours after application. Therefore, vehicle traffic areas should not be reopened until the treated surface is dry. Painting of line stripes should be done after **MasterProtect® H 303** completes its curing.

WORKING TIME

MasterProtect® H 303 only reacts with mineral based substrates. Therefore it does not react inside the container or application pump. As long as it is kept in its original container or inside a clean sealed pump, it can be used when ever needed during its shelf life.

PACKAGING

MasterProtect® H 303 is available in 5 liters plastic cans.

STORAGE

MasterProtect® H 303 should be stored under normal warehouse conditions between 5°C and 35°C. It should be stored under cover and clear of the ground and stacked not more than two layers high. Protect from freezing.

SHELF LIFE

12 months if stored in undamaged, unopened containers at above mentioned storage conditions.

WATCH POINTS

- Do not apply at temperatures below 5°C or over 35°C.
- Allow concrete surfaces to dry for between 24 and 72 hours after heavy rain or cleaning with water before applying **MasterProtect® H 303**.
- Do not apply if rain is expected within 4 hours.
- Do not alter or dilute the material as supplied.

HEALTH AND SAFETY PRECAUTIONS

It is dangerous to approach the application sites. During the application, a protective apparel, protective gloves, goggles and masks which comply with the Occupational Health and Safety Rules should be used. Due to the irritation effect of the uncured materials, the mixtures should not come into contact with skin and eyes; in case of contact, the affected area should be washed with plenty of water and soap; in case of swallowing, a physician should be consulted immediately. No food or beverages should be brought to the application area. The product should be stored and kept out of reach of children. For detailed information please consult the Material Safety Data Sheet.

DISCLAIMER

The technical information given in this publication is based on the present state of our best scientific and practical knowledge. **Master Builders Solutions Yapı Kimyasalları Sanayi ve Ticaret Ltd. Şti.** is only responsible for the quality of the product **Master Builders Solutions Yapı Kimyasalları Sanayi ve Ticaret Ltd. Şti.** is not responsible for results that may occur because the product is used other than advised and/or out of instructions regarding the place and the method of use. This technical form is valid only till a new version is implemented and nullifies the old ones.

CONTACT INFORMATION

Master Builders Solutions Yapı Kimyasalları Sanayi ve Ticaret Ltd. Şti.

Adres: Barbaros Mah. Begonya Sok.

Nidakule Kuzey Ataşehir, C Kapısı

No:3 E/5, 34746 Ataşehir İstanbul / Türkiye

Tel: 0216 217 88 00

Mail: mbs.tr@mbcc-group.com

Web: www.master-builders-solutions.com/tr-tr

® Registered trademark of a MBCC Group member in many countries of the world


MasterProtect® H 303 Technical Data Sheet -Revision
Date: 12/2020

MasterProtect® H 303 (Formerly known as Masterseal® 303)

Alkyl Alkoxysilane Based Water Repellent

Additional test and certifications:

- CTL (USA): Superior protection against water absorption (NCHRP 244, Series II-Cube Test).
- TRL (UK): Superior chloride ion protection.
- CTL (USA): Superior freeze-thaw protection (ASTM C 672). Non-air-entrained concrete.
- CTL (USA): Superior accelerated weathering results (NCHRP 244, Series IV-Southern Climate).
- TNO (NL): Approved by "Rijkswaterstaat" to be used on bridge decks, viaducts and other concrete structures for Portland Based & Slack Cement based concrete.
- SINTEF (N): Chloride diffusion constant.

	
1020 Master Builders Solutions Yapı Kimyasalları Sanayi ve Ticaret Ltd. Şti. Adres: Barbaros Mah. Begonya Sok. Nidakule Kuzey Ataşehir, C Kapısı No:3 E/5, 34746 Ataşehir İstanbul	
20 DOP NO: 02.1504.2.033 EN 1504-2 :2004 1020 - CPR - 040 065838	
MASTERPROTECT H 303 Beton Yapıların Korunması ve Tamiri İçin Mamuller ve Sistemler. Bölüm:2 Beton için Yüzey Koruma Sistemleri (Products and systems for the protection and repair of concrete structures Part 2: Surface protection systems for concrete) 1.1 (H) Yabancı madde girişine karşı koruma, (1.1 (H) Ingress protection) 2.1 (H) Nem kontrolü (2.1 (H) Moisture control) 8.1 (H) Artan direnç (8.1 (H) Increasing resistivity)	
Su emme ve alkaliye direnç: (Water absorption and resistance to alkali for hydrophobic impregnation) İşlem uygulanmamış numuneye göre su emme oranı (According to untreated sample water absorption rate)	< % 7,5
Alkali çözeltisine batırıldıktan sonraki su emme oranı (Water absorption rate (After immersion in Alkali solution)	< %10
Hidrofobik empenyenin kuruma hızı (Drying test for hydrophobic impregnation)	Sınıf 1 : % > 30 (Class 1 : % > 30)
İşleme derinliği (Depth of penetration)	Sınıf 1 : < 10 mm (Class 1 : < 10 mm)
Tehlikeli maddeler (Dangerous substances)	Madde 5.4'e uygun (Comply with clause 5.4)