

MasterSeal® Traffic 1500 (Low VOC)

Polyurethane waterproofing, traffic-bearing membrane systems for vehicular and pedestrian areas

FORMERLY SONO GUARD®

PACKAGING

- MasterSeal P 222:
5 gallon (18.93 L) pails
- MasterSeal P 220:
 - 4 gallon (15.14 L) units in
 - 5 gallon pails (18.93 L)
- MasterSeal M 205:
5 gallon (18.93 L) pails
- MasterSeal TC 235:
5 gallon (18.93 L) pails
- MasterSeal 914: 1 pint (473 mL) cans
- MasterSeal 915 (for recoat applications):
0.5 pint (236 mL) cans

YIELD

See chart on page 3

COLORS

Gray, Charcoal, Tan, Dark Tan

STORAGE

Store in unopened containers in a cool, clean, dry area

SHELF LIFE

- MasterSeal M 205 and TC 235:
5 gal pails, 1 year when properly stored
- MasterSeal 914: pint cans:
2 years when properly stored
- MasterSeal 915:
1 year when properly stored
- MasterSeal 900:
5.5 years when properly stored

DESCRIPTION

MasterSeal Traffic 1500 waterproofing systems are composed of:

- MasterSeal M 205, a low VOC, one component, moisture curing polyurethane.
- MasterSeal TC 235, a low VOC, one component aliphatic, moisture curing polyurethane.
- MasterSeal TC 235

Note: MasterSeal TC 235 Tint Base are intended for pedestrian use only and are not suitable for vehicular traffic.

For projects requiring primer, two choices are available:

- MasterSeal P 222, a one-component solvent-based primer and sealer,
- MasterSeal P 220, a two-component waterborne epoxy primer and sealer.

PRODUCT HIGHLIGHTS

- Primer coat not typically required which helps to reduce labor and material costs
- Waterproof which helps to protect concrete from freeze/thaw damage; protects occupied areas below from water damage
- Excellent chloride resistance provides protection against chloride intrusion; extends the life of reinforcing steel
- Seamless elastomeric membrane offers excellent durability and superior abrasion resistance, has no seams that may result in leaks
- Provides skid resistance to increase safety and offers excellent durability and superior abrasion resistance
- Multiple systems available, making MasterSeal Traffic 1500 ideal for various vehicular or pedestrian traffic solutions
- For TC 235 Tint Base: 40 standard colors utilizing MasterSeal 900 color packs (Pedestrian use only)
- Repairable and recoatable to extend the useful life of the system
- Four standard colors: gray, charcoal gray, tan and dark tan

VOC CONTENT

- MasterSeal M 205: 98 g/L less water and exempt solvents
- MasterSeal TC 235: 95 g/L less water and exempt solvents

Technical Data

Composition

MasterSeal Traffic 1500 is a moisture-curing polyurethane membrane.

Compliances

- UL 790 Class A Fire Rating
- ASTM C 957
- ASTM E 108
- ASTM E 84
- CSA S413

Test Data

PROPERTY*	RESULTS		TEST METHOD
	M 205	TC 235	
Weight per gallon, lbs (kg)	10.45 (4.74)	9.73 (4.4)	ASTM D 1475
Specific gravity, kg/L	1.25	1.16	
Solids			ASTM D 1259
By weight, %	86	82	
By volume, %	83	80	
Viscosity, cps	4,000-9,000	2,000-8,000	ASTM D 2393
Flash Point, °F (°C)	109 (43)	120 (49)	ASTM D 56

*Uncured material

PROPERTIES OF CURED MEMBRANES

PROPERTY	RESULTS		TEST METHOD REQUIREMENTS
	M 205	TC 235	
Hardness, Shore A	44	89	ASTM D 2240
Tensile strength, psi (MPa)	350 (2.4)	2,710 (18.7)	ASTM D 412
Elongation, %	800	555	ASTM D 412
Tear strength, PIT	N/A	259	ASTM D 1004
Weight loss, %	14	18	Max: 40
Low temperature flexibility and crack bridging	No Cracking	No Cracking	No Cracking
Adhesion in peel after water immersion, pli,			
Primed mortar	48	N/A	5
Plywood	26	N/A	5
Adhesion (Pull-off), psi			
Base Coat	300	N/A	ASTM D 4541

CHEMICAL RESISTANCE TENSILE RETENTION (ASTM C 957)

CHEMICAL	RESULTS		REQUIREMENTS
	M 205	TC 235	
Ethylene glycol	N/A	100	Min: 70
Mineral spirits	N/A	78	Min: 45
Water	N/A	102	Min: 70

Test results are averages obtained under laboratory conditions. Reasonable variations can be expected.

MASTERSEAL TRAFFIC 1500 SYSTEM M 205/MS TC 235 WEATHERING RESISTANCE AND ELONGATION RECOVERY (ASTM C 957)

CHEMICAL	RESULTS	REQUIREMENTS
Elongation recovery, %	96	Min: 90
Tensile retention, %	88	Min: 80
Elongation retention, %	96	Min: 90
Abrasion resistance, mg lost; (ASTM D 4060) CS-17 Wheel, 1,000 g load, 1,000 cycles	48 — system passes	Max: 50

Test Data, cont.

	LIGHT TO MEDIUM TRAFFIC & PEDESTRIAN	HEAVY DUTY (REFUSAL METHOD)	EXTRA HEAVY DUTY (REFUSAL METHOD)
Weight per gallon, lbs (kg)	9.9 (4.5)	9.1 (4.1)	ASTM D 1475
Base coat			
Wet mils (mm)	25 (0.64)	25 (0.64)	25 (0.64)
Dry mils (mm)	20 (0.5)	20 (0.5)	20 (0.5)
Coverage ¹	55–60 (1.35–1.5)	55–60 (1.35–1.5)	55–60 (1.35–1.5)
Mid coat			
Wet mils (mm)	None	20 (0.5)	25 (0.64)
Dry mils (mm)	None	15 (0.4)	20 (0.5)
Coverage ¹	None	75–80 (1.83–1.97)	55–60 (1.35–1.5)
Finish coat			
Wet mils (mm)	25 (0.64)	20 (0.5)	20 (0.5)
Dry mils (mm)	20 (0.5)	15 (0.4)	15 (0.4)
Coverage ¹	55–60 (1.35–1.5)	75–80 (1.83–1.97)	75–80 (1.83–1.97)
Aggregate²			
lbs per 100 ft ² (kg/m ²)	18–30 (0.8–1.5)	23–40 (1.15–2.0)	23–40 (1.15–2.0)

Coverage rates are approximate and may vary due to the application technique used.

Actual coverage rate will also depend on finish and porosity of the substrate.

¹ Coverage is ft²/gal (m²/L)

² Combined amount of aggregate, mid & topcoat (16–30 mesh rounded silica sand or proportional equivalent)

INDUSTRIES/SECTORS

- Stadiums
- Balconies
- Parking Garages
- Commercial Construction
- Building and Restoration
- Plywood decks/balconies
- Plaza decks

HOW TO APPLY

SURFACE PREPARATION

CONCRETE

1. Concrete must be fully cured (28 days), structurally sound, clean and dry (ASTM D 4263). All concrete surfaces (new and old) must be shot blasted to remove previous coatings, laitance and all miscellaneous surface contamination and to provide profile for proper adhesion. Abrasive shot blasting must occur after concrete repair has taken place. Acid-etching is not permitted. Proper profile should be a minimum of ICRI CSP-3 (as described in ICRI document 03732.) For balconies and other pedestrian areas with limited space or access for shot-blasting, alternative mechanical methods can be used to achieve the recommended surface profile.

2. Repair voids and delaminated areas with BASF branded cementitious and epoxy patching materials. For application when fast-turn repairs are required, MasterSeal 350 can be used to repair patches up to 1.5" in depth when used in aggregate slurry mix. Please refer to the MasterSeal 350 Technical Data Guide for proper application techniques.

3. All units must be applied within the specified pot life.

SURFACE PRE-STRIPPING AND DETAILING

1. For nonmoving joints and cracks less than 1/16" (1.6 mm) wide, apply primer when required, followed by 25 wet mils (0.6 mm) pre-striping of MasterSeal M 205. MasterSeal M 205 must be applied to fill and overlap the joint or crack 3" (76 mm) on each side. Feather the edges.
2. Dynamic cracks and joints 1/16" (1.6 mm) and greater wide must be routed to a minimum of 1/4 by 1/4" (6 by 6 mm) and cleaned. Install bond breaker tape to prevent adhesion of sealants to the bottom of joint. Prime joint faces only with MasterSeal P 173 (see Form No. 1017962). Fill joints deeper than 1/4" (6 mm) with appropriate backer rod and MasterSeal SL 1™/SL 2™ (slope

grade or self-leveling) or MasterSeal NP 1™/NP 2™ sealants. For cracks, sealant should be flush with the adjacent concrete surface. For expansion joints, sealant should be slightly concave. Once the sealant is cured the lines should be prestriped with base coat MasterSeal M 205, overlap the joint 3" (76 mm) on each side.

3. Sealed joints 1" (25 mm) or less can be coated over with MasterSeal Traffic 1500. Expansion joints exceeding 1" (25 mm) wide should not be coated over with MasterSeal Traffic 1500 so that they can perform independently of the deck coating system.
4. Where the coating system will be terminated and no wall, joint or other appropriate break exists, cut a 1/4" x 1/4" (6 x 6 mm) keyway into the concrete. Fill and coat keyway during application of MasterSeal M 205.
5. Form a sealant cant into the corner at the junction of all horizontal and vertical surfaces (wall sections, curbs, columns). Prime with MasterSeal P 173 and apply a 1/2–1" (13–25 mm) wide bead of MasterSeal NP 1 or MasterSeal NP 2 sealants. Tool to form a 45 degree cant. Apply masking tape to the vertical surfaces 4–5" (102–127 mm) above the sealant cant to provide a clean termination of

the vertical detail coat. After the sealant has cured, apply 25 mils (0.64 mm) of MasterSeal M 205 over the cured cant up to the masking tape and 4" (102 mm) onto deck surface.

6. In locations of high movement such as wall and slab intersections, a reinforcing fabric is required. After the sealant cant bead is applied and cured, apply 25 wet mils of MasterSeal M 205 (0.64 mm) over the sealant and embed MasterSeal 995 reinforcing fabric into the wet detail coat.

UNCOATED METAL SURFACES

1. Remove dust, debris, and any other contaminants from vent, drain-pipe and post penetrations, reglets and other metal surfaces. Clean surfaces to near white per SSPC-NACE2 and prime immediately with MasterSeal P 173. Provide appropriate cant with MasterSeal NP1/NP2. Apply a detail coat of 25 wet mils of MasterSeal M 205 over the primed metal and sealant.

PLYWOOD

1. All plywood must be smooth-faced, APA-stamped and exterior grade tongue and groove. Construction must conform to code, but plywood must not be less than $\frac{23}{32}$ " (20 mm) thick. Plywood spacing and deck construction must follow APA guidelines.
2. Surfaces must be free of contaminants. Priming is not necessary on clean, dry plywood.
3. All seams must be caulked with MasterSeal NP 1 or MasterSeal NP 2 sealants. Reinforce all seams between plywood sheets and between flashing and the plywood deck by embedding MasterSeal 995 Reinforcing Fabric into the pre-stripping.

HOW TO APPLY

COLOR

1. All of the 40 standard colors from the Popular Palette for Sealants and Waterproofing require the use of 2 NP 2™ color packs per 5 gallon pail of Sonoguard® Tint-Base.
2. A second aesthetic Top Coat of 10–15 wet mils (0.2–0.4 mm) is required with all Tint-Base colors to achieve a uniform appearance.

MIXING

1. Transfer entire contents of pigment cans into Sonoguard® Top Coat Tint-Base. Use a spatula or knife to remove all the pigment from the container.
2. With a slow-speed drill and Jiffy mixer, mix 4–6 minutes. The paddle blade must be kept below the surface of the Tint-Base to avoid whipping air into it.

3. To ensure consistent color throughout the pail, pour contents into separate container and continue mixing until all Tint-Base has dispersed.
4. When using multiple units, all units must be boxed to ensure color consistency.

APPLICATION OF PRIMER

PRIMER

NOTE: When primer is required on a job, follow these steps. When applying Traffic 1500 without using a primer, proceed to Application.

1. After thoroughly vacuuming the surface, apply MasterSeal P 222 or P 220 to all the properly prepared deck surfaces at the rate of 200–250 ft²/gal (4.9–6.1 m²/L). Using a roller pan and a short- to medium-nap roller cover, force the primer into pores and voids to eliminate pinholes. Do not apply over pre-stripping. Use only solvent-resistant tools and equipment.
2. Allow primer to dry until tack-free. M 205 must be applied the same working day.

MASTERSEAL M 205

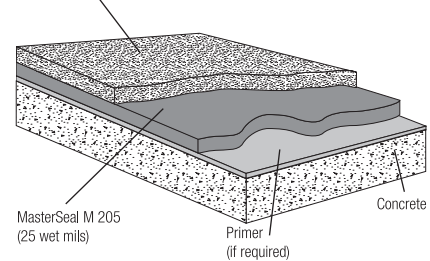
1. All preparatory work must be completed before application begins. Be certain the substrate is clean, dry, stable and properly profiled. Sealants and pre-stripping should be properly cured. Apply the base, mid and finish coats with a properly sized squeegee to arrive at the required mil thicknesses.
2. Apply MasterSeal M 205 at 25 wet mils thick (0.64 mm) using a proper notched squeegee to entire deck surface, and back roll, overcoating the properly prepared cracks, joints and flashings. Do not coat expansion joints over 1" (25 mm) wide. Slope grade product should be used on a slope greater than 15%.
3. Allow curing time of overnight (16 hour minimum). Extend the curing time in cool or dry weather conditions. The surface of MasterSeal M 205 should have a slight tack. If the coating has been exposed for a prolonged period, consult Technical Service for recommendations.

APPLICATION METHODS OF SYSTEMS

MasterSeal Traffic 1500 can be installed in several configurations, depending upon the degree of traffic to which the system is exposed. In areas of extreme traffic (turning lanes, pay booths, entrances and exits), apply the Extra Heavy-Duty Traffic System. The following summary briefly describes each configuration. All coverage rates are approximate.

LIGHT TO MEDIUM DUTY TRAFFIC AND PEDESTRIAN SYSTEM

MasterSeal TC 235 (25 wet mils) with aggregate backrolled into wet top coat

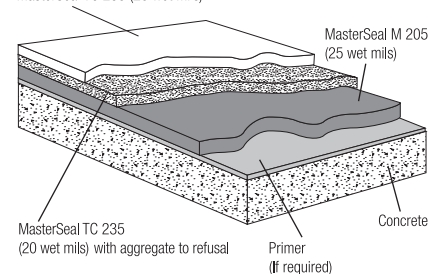


LIGHT- TO MEDIUM- DUTY TRAFFIC & PEDESTRIAN SYSTEM

1. Prime concrete substrate (if required).
2. Apply 25 (0.64 mm) wet mils of MasterSeal M 205 using a proper notched squeegee at 55–60 ft²/gal (1.35–1.47 m²/L). Immediately backroll to level base coat. Allow to cure overnight.
3. Apply 25 wet mils (0.64 mm) MasterSeal TC 235 using a proper notched squeegee at 55–60 ft²/gal (1.35–1.47 m²/L). Immediately backroll to level MasterSeal TC 235 material. While the coating is still wet, broadcast MasterSeal 941 or equivalent 16–30 rounded silica sand at 15–25 lbs/100 ft²/gal (0.75–1.25 kg/m²), then backroll into the coating to fully encapsulate.
4. When installing the MasterSeal TC 235 Tint Base, a second coat may be required for proper hiding. A mock up should be performed to address any aesthetic expectations.

HEAVY DUTY TRAFFIC SYSTEM (Aggregate to refusal method)

MasterSeal TC 235 (20 wet mils)



HEAVY-DUTY TRAFFIC SYSTEM

1. Prime concrete substrate (if required).
2. Apply 25 (0.64 mm) wet mils of MasterSeal M 205 using a proper notched squeegee at 55–60 ft²/gal (1.35–1.47 m²/L). Immediately backroll to level base coat. Allow to cure overnight.

3. Apply 20 wet mils (0.51 mm) MasterSeal TC 235 using a notched squeegee at 75–80 ft²/gal (1.83–1.97 m²/L). Immediately backroll to level MasterSeal TC 235. The next step, #4, can utilize either method described in 4A or 4B.

4A. AGGREGATE TO REFUSAL METHOD

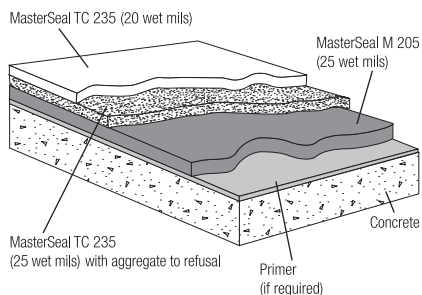
Immediately broadcast MasterSeal 941 or equivalent 16–30 mesh, rounded silica sand into the wet coating at the rate of 20–35 lbs/100 ft² (1.0–1.75 kg/m²). Immediately after the aggregate broadcast and while the coating is still wet, blow any excess aggregate via a portable blower forward into the wet coating. Do not over apply aggregate; it is acceptable to have localized wet spots in the aggregate surface after completion of this method. This process requires coordination between all of the members in the work crew. The blower operator, wearing clean spiked shoes, should blow the excess aggregate forward towards the freshly applied and back rolled topcoat. In this method, the coating should not accept additional sand, minimal excess aggregate is on the surface, less aggregate is used and the textured appearance should be fairly uniform.

4B. BROADCAST AND BACKROLL METHOD

Immediately broadcast MasterSeal 941 or equivalent 16–30 mesh, rounded silica sand into the wet coating and backroll to encapsulate the aggregate. Evenly broadcast aggregate at the rate of 15–20 lbs/100 ft² (0.75–1.0 kg/m²). Allow to cure overnight.

5. Ensure there is no moisture on the surface of the aggregate/membrane before application of topcoat. Remove all loose aggregate, then apply 20 wet mils using a flat squeegee at 75–80 ft²/gal (1.84–1.96 m²/L). Immediately backroll to level MasterSeal TC 235.
6. For additional slip resistance, immediately broadcast MasterSeal 941 or equivalent 16–30 mesh rounded silica sand at a rate of 3–5 lbs/100 ft² (0.15–0.25 kg/m²) and backroll to encapsulate.

EXTRA HEAVY-DUTY SYSTEM (Aggregate to refusal method)



EXTRA-HEAVY DUTY SYSTEM

1. Prime concrete substrate (if required).
2. Apply 25 (0.64 mm) wet mils of MasterSeal M 205 using a proper notched squeegee at 55–60 ft²/gal (1.35–1.47 m²/L). Immediately backroll to level base coat. Allow to cure overnight.
3. Apply 25 wet mils (0.64 mm) MasterSeal TC 235 using a properly notched squeegee at the rate of 55–60 ft²/gal (1.35–1.47 m²/L). Immediately backroll to evenly level topcoat. The next step, #4, can utilize either method described in 4A or 4B.
- 4A. AGGREGATE TO REFUSAL METHOD
Immediately broadcast MasterSeal 941 or equivalent 16–30 mesh, rounded silica sand into the wet coating at the rate of 20–35 lbs/100 ft² (1.0–1.75 kg/m²). Immediately after the aggregate broadcast and while the coating is still wet, blow any excess aggregate via a portable blower forward into the wet coating. Do not over apply aggregate; it is acceptable to have localized wet spots in the aggregate surface after completion of this method. This process requires coordination between all of the members in the work crew. The blower operator, wearing clean spiked shoes, should blow the excess aggregate forward towards the freshly applied and back rolled topcoat. In this method, the coating should not accept additional sand, minimal excess aggregate is on the surface, less aggregate is used and the textured appearance should be fairly uniform.
- 4B. BROADCAST AND BACKROLL METHOD
Immediately broadcast MasterSeal 941 or equivalent 16–30 mesh, rounded silica sand into the wet coating and backroll to encapsulate the aggregate. Evenly broadcast aggregate at the rate of 15–25 lbs/100 ft² (0.75–1.25 kg/m²). Allow to cure overnight.
5. Ensure there is no moisture on the surface of the aggregate/membrane before application of topcoat. Remove all loose aggregate, then apply 20 wet mils using a flat squeegee at 75–80 ft²/gal (1.84–1.96 m²/L). Immediately backroll to level MasterSeal TC 235.
6. For additional slip resistance, immediately broadcast MasterSeal 941 or equivalent at a rate of 3–7 lbs/100 ft² (0.15–0.25 kg/m²) and backroll to encapsulate.

IMPORTANT NOTE: All coverage rates are approximate and may vary due to the application technique used. Coverage rates are affected by substrate texture, choice and distribution of aggregate, intermediate coat

aggregate load and environmental conditions. Application methods and conditions are not under the control of BASF. Ensure that an adequate amount of aggregate is utilized to achieve desired slip resistance.

MOCKUP

Provide mockup of at least 100 ft² (9.3 m²) to include surface profile, sealant joint, crack, flashing and juncture details and allow for evaluation of slip resistance and appearance of MasterSeal Traffic 1500 system.

1. Install mockup with specified coating types and with other components noted.
2. Locate where directed by architect.
3. Mockup may remain as part of work if acceptable to architect. For recoat applications, see MasterSeal Traffic 1500 technical bulletin #24.

CURING TIME

Allow curing time of 72 hours before vehicular use and 48 hours before pedestrian use. Extend the curing time in cool-weather conditions. To reduce the time period in which MasterSeal Traffic 1500 might be vulnerable to inclement weather or to reduce the time between coats, use MasterSeal 914.

MAINTENANCE

1. Portions of the membrane that exhibit wear are considered a maintenance item, and are not considered a warrantable item.
2. Surfaces may be cleaned with commercial detergents. BASF recommends that a maintenance agreement be established between the owner and applicator.
3. Periodic inspection and repair of damaged surfaces will greatly prolong the performance and life of the system.
4. Remove all sharp debris such as sand, gravel and metal on a regular basis to avoid damage to the coating.
5. When removing snow, avoid the use of metal blades or buckets that may damage the coating.

CLEAN UP

Clean all tools and equipment with MasterSeal 990 or xylene.

FOR BEST PERFORMANCE

- MasterSeal NP 100 and MasterSeal NP150 should not be used in conjunction with this urethane deck coating system due to potential for curing issues.

- If vapor drive is present or suspected, please consult with your local BASF representative prior to system application.
- Concrete should have a minimum compressive strength of 3,000 psi (20.7 MPa) and be cured for a minimum of 28 days.
- Do not apply to concrete that is out-gassing
- Be sure to allow for movement in the deck by the proper design and use of expansion and control joints.
- When applying sealants, use backing materials according to industry standards.
- Do not apply when substrate temperatures are over 110 °F (32 °C) or under 40 °F (4 °C).
- When applying MasterSeal 1500 at interior or contained spaces, provide adequate ventilation with a minimum of six air changes per hour.
- When adequate ventilation for use of MasterSeal Traffic 1500 cannot be maintained, consider the use of MasterSeal 2500 Traffic coating system, Form No 1017917.
- Be certain that all aggregate not properly encapsulated is thoroughly removed.
- On steep ramps in excess of 15%, contact your local BASF representative.
- Substrate temperature must be more than 5 degrees above dew point during application and cure.
- MasterSeal TC 235 Tint Base are intended for pedestrian use only and are not suitable for vehicular traffic.
- MasterSeal TC 235 Tint Base should be mixed with 2 BASF MasterSeal 900 color packs per 5 gallons in order to achieve the desired color tint.
- Do not apply MasterSeal Traffic 1500 to concrete slabs on grade, unvented metal pan decks and split slab applications with a membrane between slabs.
- Select the proper amount of aggregate to promote slip resistance.
- The best method to ensure average wet film thickness is the use of a grid system. Divide the surface area to be coated into grids and calculate the square footage of each. For example, one pail of MasterSeal M 205 applied at 55–60 ft²/gal should cover approximately 275–300 sq ft or a minimum grid of 16 x 16 ft at 25 wet mils. The wet film thickness can also be verified with a wet film thickness gauge. Verify coverage via site mockup.
- Pre-stripe to level out recessed sealant joints (less than 1" [25 mm]) for optimal aesthetic appearance.

- Avoid application of MasterSeal Traffic 1500 when inclement weather is present or imminent.
- Do not apply MasterSeal Traffic 1500 to damp, wet, or contaminated surfaces.
- MasterSeal Traffic 1500 is not suitable for use where chained or metal-studded tires will be used.
- Proper application is the responsibility of the user. Field visits by BASF personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.
- CAD & PDF deck coating details are available for download from our website; BASF Customer Service can direct you to the site.

FOR BEST PERFORMANCE: TC 225 TINT BASE ONLY

- Avoid whipping air into Tint-Base.
- Mix pigment cans thoroughly into Tint-Base.
- Always do a test area to assure acceptable color appearance and slip resistance.
- Do not apply Sonoguard® Tint-Base heavier than the recommended 25 mil (0.6 mm) application.
- Colors exposed to direct sunlight may fade over a period of time. Darker colors potentially fade at an increased rate.
- Apply only to pedestrian traffic areas.
- Aggregate and substate conditions may affect color and appearance.

HEALTH, SAFETY AND ENVIRONMENTAL

Read, understand and follow all Safety Data Sheets and product label information for this product prior to use. The SDS can be obtained by visiting www.master-builders-solutions.basf.com, e-mailing your request to basfbascst@basf.com or calling 1(800)433-9517. Use only as directed.

**For medical emergencies only,
call ChemTrec® 1(800) 424-9300.**

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