valspar FLOORING

MORRITEX™ H.D.

100% solids industrial floor system

Technical Data Sheet

DESCRIPTION:

MORRITEX™ H.D. is a monolithic flooring system that is designed to be installed between 1/16" and 3/16" at varying degrees of surface texture. The system offers chemical resistance and high compressive strength, which accepts heavy abuse from impact and heavy loading.

ADVANTAGES:

- High compressive strength
- Protects sub-floor from chemical or physical attack
- Tough, durable & seamless floor
- Highly UV stable
- Solvent free, low odor
- (Optional) Integral cove, base & curbs
- (Optional) Crack-bridging/Waterproofing flexible membrane.

TYPICAL USES:

- Chemical processing facilities
- Pharmaceutical facilities
- Beverage plants, dairies, breweries, soft drink producers and distilleries
- Sewage & water treatment plants
- Animal laboratories & housing
- Food & meat processing plants
- Commercial & institutional kitchens
- Automotive maintenance facilities

SYSTEM SPECIFICATION:

MORRITEX™ H.D. as manufactured by Valspar shall consist of R-90/H-100 as the primer, R-90/H-200 and aggregate as the body coat, and R-90/H-300 as the topcoat. Optional finish coats are as follows:

- Satin Finish R-95S/H-400
- Semi-Gloss Finish R-96SG/H-400
- CRU-400 Chemical Resistant Urethane
- 1070

Consult local Technical Sales for additional options.

TYPICAL PHYSICAL PROPERTIES:

TYPE TEST	TEST METHOD	TYPICAL VALUE
Compressive Strength	ASTM C-579	10,400 psi (72 MPa)
Tensile Strength, Binder	ASTM D-638	7,250 psi (50 MPa)
Impact Resistance	Gardner Impact Tester	>160 in•lb
Abrasion Resistance	ASTM D-4060	0.105 gm
Flammability	ASTM D-635	Self Extinguishing
Water Absorption	ASTM C-413-88	0.2%
Coefficient of Thermal Expansion	ASTM C-531-90	1.32×10^{-5} in/in/°F
Flexural Strength	ASTM C-580-90	3,200 psi (22 MPa)
Curing Shrinkage	ASTM D-531-90	3.75×10^{-4} in/in
Shore D Hardness	ASTM D-2240-91	85

Above typical values based on 7 days cure @ 75 °F

LIMITATIONS:

- Heat resistance limit of 160°F for continuous exposure.
- This product is not designed for exterior use, immersion, or any use where moisture can reach the underside of the flooring.
- Technical Data Sheets are updated periodically. To ensure the most current version is being used, visit Technical Resources on *www.valsparflooring.com*.
- Proper material application is the responsibility of the user. Site visits by Valspar personnel are for making technical recommendations only and not for supervising or providing quality control.
- Do not apply to concrete floors less than 60 days old without consulting Valspar Technical Service.
- Do not apply to floors previously treated with curing and parting compounds or other coatings unless they have been completely removed by chemical or mechanical means.
- Do not use on vinyl, asphalt, rubber, glazed tile, paving brick, quarry tile, Mexican tile, or similar materials.

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- Do not apply if the floor or air temperature is below 55°F or over 90°F or if the relative humidity is above 85%.
- Do not apply over honeycombed or structurally unsound surfaces.
- Before applying for protection against specific chemical environments, consult Chemical Resistance Guide or Valspar Technical Service.
- If the product is to be applied in or near areas containing foodstuffs, they should be removed before the application and until the coating has fully cured and all vapors have dissipated.
- Do not thin these products. Addition of thinners will slow the cure and reduce the ultimate properties of the products. Critical recoat times will also be affected.

PRELIMINARY FLOOR INSPECTIONS:

In general, the area to be surfaced must be clean, sound, dry and above 60°F to assure a successful installation. If there is uncertainty as to whether or not a curing compound or any coating is present on the floor, the following two tests may be performed in order to find out:

1. Pour a cup of water on three or four areas of the floor. If the water puddles out, then there probably is no curing compound or any coating on the floor, and the preparation process may begin. However, it the water beads up like on a waxed car, this may indicate the presence of a curing compound or any coating that must be removed by chemical or mechanical means.
2. Place a drop of PC-42 ACID CONDITIONER on the floor. If the acid bubbles, a curing compound or any coating is not present.

Always be alert to any possible airborne or surface contaminants, which may contribute to problems such as fisheyes, crawling, cratering, etc.

The concrete floor should be examined for the presence of moisture. This can be accomplished by the following means:

1. Calcium Chloride Test
2. Delmhorst Moisture Meter
3. Polyethylene Sheet Method.

Calcium Chloride Test: This test method works by a change in weight of moisture absorbing anhydrous calcium chloride and indicates the amount of moisture transmitting out of a large concrete surface area. Pounds is the equivalent weight of the water that is emitted from a 1,000 square foot concrete slab surface area in a 24-hour period of time (standard test duration is 60-72 hours). Follow instructions as outlined by the supplier of the test kits. Make sure the concrete surface to be tested is completely clean of any residue and any debris. All seals, including curing compounds must be removed prior to performing tests. Sources: Roofing Equipment Inc., Denver, CO 303-371-7667; Sealflex Industries Inc., Costa Mesa, CA 714-708-0850; Vinyl Plastics Inc., Sheboygan, WI 920-458-4664; and Floor Seal Technology, San Jose, CA 408-436-8181

SURFACE PREPARATION:

All oil, grease, wax, laitance, curing compounds, water-soluble concrete hardeners and other surface contaminants must first be removed. PC-43 WASH OFF REMOVER or PC-46 DRY EZE should be used for removal of sealers, finishes and paints. Inspect the concrete and remove loose or soft concrete by scarifying or sand blasting.

STANDARD TESTS:

Refer to the standard test methods below for further information.

ASTM D 4258-83	Standard Practice for Surface Cleaning Concrete for Coating
ASTM D 4259-83	Standard Practice for Abrading Concrete
ASTM D 4260-83	Standard Practice for Acid Etching Concrete
ASTM D 4262-83	Standard Test Method for pH of Chemically Cleaned or Etched Concrete Surfaces

CHEMICAL PREPARATION:

PC-40 DYNOMITE should be used as directed to remove all traces of grease, oil, and dirt followed by a thorough rinsing to remove all cleaning residues. Remove excess water with a good wet vacuum. To remove laitance and to give a slight texture to area to be surfaced, acid-etch using PC-42 ACID CONDITIONER. Using a 1:1 dilution ratio with water, apply evenly as possible to the surface and vigorously scrub into the surface with a stiff bristle brush or automatic scrubber. Thoroughly rinse with copious quantities of water and use wet vacuum to remove any residues. **Repeat this process until concrete surface is the texture of medium grit sandpaper.**

MECHANICAL PREPARATION:

Mechanically abrade or “shot-blast” the surface to the texture of medium grade sandpaper, then vacuum up any dust. Whenever “shot-blasting” is utilized, be careful to leave concrete with a uniform texture.

APPLICATION INFORMATION @ 1/16":

Process Step	Material	Mix Ratio	Theoretical Coverage
Primer	R-90/H-100	2:1	200-250 sq.ft./gal
Body Coat	R-90/H-200 w/pigment	2:1	See Body Coat Section
Aggregate	35 mesh sand	Saturation Broadcast	40 lbs./100 sq.ft.
Topcoat	R-90/H-300 w/pigment	2:1	70 sq.ft./gal
Optional Finishes	R-95S/H-400	3:1	400 sq.ft./gal
	R-96SG/H-400	2.5:1	400 sq.ft./gal
	CRU-400	2:1	350-400 sq.ft./gal
	1070	2:1	250-320 sq.ft./gal

APPLICATION INFORMATION @ 1/8":

Process Step	Material	Mix Ratio	Theoretical Coverage
Primer	R-90/H-100	2:1	200-250 sq.ft./gal
Body Coat (Slurry)	R-90/H-200 w/pigment	2:1	See Body Coat Section
Aggregate	35 mesh sand	Saturation Broadcast	80 lbs./100 sq.ft.
Topcoat	R-90/H-300 w/pigment	2:1	90 sq.ft./gal
Optional Finishes	See above		

APPLICATION INFORMATION @ 3/16":

Process Step	Material	Mix Ratio	Theoretical Coverage
Primer	R-90/H-100	2:1	200-250 sq.ft./gal
Body Coat (Slurry)	R-90/H-200 w/pigment	2:1	See Body Coat Section
Aggregate	35 mesh sand	Saturation Broadcast	80 lbs./100 sq.ft.
Body Coat	R-90/H-200 w/pigment	2:1	See Body Coat Section
Aggregate	35 mesh sand	Saturation Broadcast	40 lbs./100 sq.ft.
Topcoat	R-90/H-300 w/pigment	2:1	115 sq.ft./gal
Optional Finishes	See above		

Primer:

- Premix the R-90 and H-100 separately using a low speed drill and Jiffy mixer. Mix for two minutes and until uniform, exercising caution not to introduce air into the material.
- Add 2 parts R-90 and 1 part H-100 by volume. Mix with a low speed drill and Jiffy mixer for three minutes and until uniform.
- R-90/H-100 may be applied by roller, trowel or squeegee. Coverage will vary depending on the porosity of the substrate and surface texture.
- Seed lightly (10-15% capacity) with 35 mesh sand.

Body Coat:

- Proper floor level lighting is **highly important.** It is best to turn off any overhead lighting.
- Body coat must be applied within 6 to 24 hours of priming at 77°F. It can be applied as soon as the primer is tack free.
- Premix the R-90 and H-200 separately using a low speed drill and Jiffy mixer. Mix for two minutes and until uniform, exercising caution not to introduce air into the material.
- Color is achieved by using R-90 Clear and Epoxy Color Add. The ratio is one (1) quart Epoxy Color Add to two (2) gallons of R-90 resin.
- Add 2 parts R-90 and 1 part H-200 by volume. Mix with a low speed drill and Jiffy mixer for three minutes and until uniform before adding aggregate.

For **Body Coat**, the following amounts will yield 110-115 sq.ft. at 21 mils or 76 sq.ft./gal:

R-90 with Epoxy Color Add **1 gal.**
H-200 **½ gal.**

For **Body Coat (Slurry)**, the following amounts will yield 55-60 sq.ft. at 42 mils or 38 sq.ft./gal:

R-90 with Epoxy Color Add **1 gal.**

H-200	**½ gal.**
35 mesh sand	**21 lbs.**

- Spread a ribbon of body coat mix with a notched trowel or squeegee in accordance with consumption guidelines.
- Back roll for uniform wet film thickness.
- Broadcast to saturation with 35-mesh sand utilizing "rainfall" technique.

Vacuum, Scrape/Sand, and Final Vacuum:

- Be absolutely certain that the body coat hardened (12-14 hours).
- Remove all loose aggregate with a heavy-duty industrial vacuum. Sweeping is not an effective means of removing excess sand.
- Carefully scrape or sand to knock off any projections. Utilize a standard swivel pole or stick sander with approximately an 80-grit paper. Alternately, the surface can be scraped with the leading edge of a trowel.
- After sanding or scraping, the floor must be revacuumed clean.
- For 3/16" system, proceed with second body coat. For 1/16" and 1/8" systems, proceed to Topcoat Section.

Topcoat:

- Premix the R-90 and H-300 separately using a low speed drill and Jiffy mixer. Mix for two minutes and until uniform, exercising caution not to introduce air into the material.
- Color is achieved by using R-90 Clear and Epoxy Color Add. The ratio is one (1) quart Epoxy Color Add to two (2) gallons of R-90 resin.
- Add 2 parts R-90 and 1 part H-300 by volume. Mix with a low speed drill and Jiffy mixer for three minutes and until uniform.
- Apply evenly by trowel and back roll or squeegee and back roll at a rate of:

1/16" system	70 sq.ft./gal.
1/8" system	90 sq.ft./gal.
3/16" system	115 sq.ft./gal.

CURE TIME:
At a cure temperature of 75°F, allow 12-14 hours for foot traffic and 24 hours for light traffic. For heavy traffic and/or chemical spillages allow 72 hours.

CLEAN UP:
Tools should be cleaned right away with soap and water. Solvents such Xylene or UR-9 MCU THINNER can also be used. Any cured or hard material can be removed with the use of PC-46 DRY EZE.

REFER TO MATERIAL SAFETY DATA SHEET FOR FURTHER SAFETY AND HANDLING INFORMATION.

See individual labels for more caution statements.

KEEP OUT OF THE REACH OF CHILDREN.

DISPOSAL:
Dispose in accordance with federal, state, and local regulations. Use licensed hazardous waste company.

Empty containers may contain product residue, including flammable or explosive vapors. Do not cut, puncture or weld on or near container. All label warnings must be observed until the container has been commercially cleaned or reconditioned.

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