

ENDURABLE SEALER

Technical Data Sheet

Endurable Sealer is a revolutionary sealer that has been created from the newest cutting edge polyurethane technology that allows for maximum penetration, durability, and chemical resistance – while still delivering ease of application.

ADVANTAGES

1. Comes in Matte and Gloss
2. Spray, roll, or micro-fiber application
3. Low VOC's, Low Odor
4. Heavy Duty—forklift traffic and parking garages
5. UV Stable—Will not yellow or degrade in sunlight
6. Anti-graffiti
7. Safe for countertops
8. Incredible chemical resistance
9. Very hard --incredible scratch resistance
10. No Hot Tire Pick-Up

COVERAGE RATES

300 – 800 square feet per gallon depending on porosity of surface

PACKAGING

Concentrate that makes 1.12 gallons

Concentrate that makes 9 gallons (9 gallon concentrate may be made 4.5 gallons at a time)

MIX RATIO

Water is mixed with the sealer components at a ratio of 2 parts water to 1 part mixed sealer components (for fastest dry times on smooth surface concrete, mix the second coat of sealer at 1 part water to 1 part mixed components)

SHELF LIFE AND STORAGE

Product has a shelf life of a minimum of 1 year in original containers. Store product between 40 and 77 degrees Fahrenheit. Keep product free from excessive heat, moisture, and freezing.

WHERE TO USE

1. Concrete – garages, driveways, patios, walkways, countertops, pool decks, commercial floors, etc.
2. Masonry
3. Terrazzo and natural stones

MAINTENANCE

Use mild detergent solutions, light vinegar solutions, or light ammonia solutions. Reseal as necessary – 5 to 10 years depending on traffic and usage. Routine buffing with a light pad on a low-speed buffer can help maintain an even sheen and a clean surface.

DURABILITY AND CHEMICAL TESTING AND PERFORMANCE RESULTS

Abrasion Resistance	H-18 1000 cycles, mg loss	ASTM D 2060	260
Abrasion Resistance	CS-17 1000 cycles, mg loss	ASTM D 2060	25
Modulus of Elasticity, kpsi	ASTM D 638	175-300	
Tensile Strength, psi	ASTM D 638	4400-7200	

Tear Strength, pli	ASTM D 624	150-300	
Artificial Weathering	ASTM C 23	None	
VOC Content	ASTM D3960	< 1%	
Pendulum Hardness Test	ASTM D4366	1 Day – Matte- 38 seconds/Gloss-38 seconds	
Pendulum Hardness Test	ASTM D4366	5 Day –Matte- 154 seconds/Gloss-174 seconds	
Pendulum Hardness Test	ASTM D4366	7 Day –Matte-162 seconds/Gloss-184 seconds	
Coefficient of Friction Test	ASTM D-2047	Dry -- 0.6	Wet -- 0.47
Water Vapor Transmission	ASTM E 96	1.26 grains/hour/square foot	

CHEMICAL RESISTANCE TESTING ACCORDING TO ASTM D 1308 – Product cured for 14 days at 70 degrees Fahrenheit before testing

CHEMICAL	TIME-- 4 hours	Time--24 hours
Betadine	No Effect	No Effect
Bleach	No Effect	No Effect
Gasoline	No Effect	No Effect
Acetic Acid	No Effect	No Effect
Water	No Effect	No Effect
MEK (complete immersion)	Slightly Soft	Soft
Brake Fluid	No Effect	Slightly Soft
H2SO4	No Effect	No Effect
IPA	No Effect	Slightly Soft
HCl	No Effect	No Effect
Skydrol	No Effect	No Effect
NaOH	No Effect	No Effect
NH4OH	No Effect	No Effect

Scale of performance 10=excellent 0=very poor	Endurable Sealer 1 hour performance	Competitive Sealer # 1 1 hour performance	Competitive Sealer # 2 1 hour performance	Endurable Sealer 24 hour performance	Competitive Sealer # 1 24 hour performance	Competitive Sealer # 2 24 hour performance
<i>Water</i>	10	7	10	10	1	4
<i>Water blush</i>	10	8	9	10	2	3
<i>Vinegar</i>	10	6	7	10	0	0
<i>Bleach</i>	10	5	7	10	1	2
<i>Lemon Juice</i>	10	9	9	10	4	6
<i>Mustard</i>	10	6	8	10	1	2
<i>Olive Oil</i>	10	5	8	10	0	2
<i>Cola</i>	10	7	6	10	1	1
<i>Brake Fluid</i>	10	8	8	9	0	0

APPLICATION INSTRUCTIONS

For optimum results, open troweled concrete mechanically or chemically.

Apply to dry, porous concrete. Mix Component 1 with Component 2, then mix with twice as much water as components. Use a mixing drill and paddle. Pot life is 45 to 90 minutes on matte and 90 to 180 minutes on gloss. Do not apply 2nd coat until 1st coat is completely dry.

Endurable Sealer may be applied via pump sprayer with a conical tip that sprays at .05 to .15 gpm at 40 psi, airless sprayer, or T-Bar micro-fiber applicator, . When applying over stain, it is recommended to spray the first coat to avoid movement of color residue. Second coat **MUST** be applied via microfiber T-Bar applicator or low-speed buffer when dealing with smooth surface floors. Second coat may be applied via sprayer on most exterior concrete. **DO NOT OVER-APPLY.** Coverage rates are typically between 300 and 500 square feet per gallon per coat on the first coat depending on porosity of surface. Subsequent coats on low porosity surfaces may yield higher coverage rates of 500-800 square feet per gallon. Before application of sealer, make sure surface is free from dirt, oils, previous sealers, etc. It must be applied in thin coats. Two coats are usually sufficient, but applicator must determine the specific need. Sealer should be applied between 40 and 90 degrees Fahrenheit. After applying the first coat, wait until the sealer is dry to the touch, usually 45 to 180 minutes for matte, 3-6 hours for gloss, depending on temperature and air flow, and then subsequent coats may be applied. Subsequent coats typically take 3 to 8 hours to dry for matte and 6 to 24 hours

for gloss depending on temperature and air flow. After application, tools may be cleaned using soap and water. Light traffic is possible after 8-24 hours and heavy traffic is possible after 24-48 hours. The sealer will gain strength over the next few days after application and will reach full cure after 7-10 days. Avoid subjecting the sealer to freezing temperatures or moisture for 12-36 hours after application. Make sure substrate is dry before application. Endurable Concrete Stain can penetrate Endurable Sealer for the first 4 hours after sealer is dry when stain is mixed in water. Endurable Concrete Stain may penetrate Endurable Sealer when mixed in acetone for the first two days after application. Upon further curing, the stain cannot penetrate unless an additional coat of Endurable Sealer is applied. Only Endurable Vertical Stripper may remove Endurable Sealer when sealer is fully cured. This requires the stripper to be covered and remain wet for a minimum of 12 to 24 hours. FOR TIPS AND TECHNIQUES, VISIT OUR WEBSITE AT WWW.HDIPINC.COM UNDER THE ENDURABLE SEALER DROP-DOWN MENU. It may be beneficial to strain product before use.

LIMITATIONS

Product should be applied in thin coats. Do not over-apply. Product must be applied to clean, dry substrates. It is recommended to apply to porous surfaces for longest-lasting results. Product should not be applied to concrete with moisture related issues. If moisture issue is suspected, contact HDIP INC to get recommendation on how to deal with the moisture issues prior to application of sealer.

PRODUCT AVAILABILITY

Product is available at retail distributors around the world. Contact HDIP INC at info@hdipinc.com to find the nearest distributor.

SLIP RESISTANCE AND CLEANABILITY

Endurable Sealer was formulated with chemical enhancement to provide a slip-resistant surface but the profile of the concrete will dramatically affect the slip-resistance. Aggressive finishes, such as broom-finished concrete, will yield the best coefficient of friction and will be slightly more challenging to clean. Smooth surfaces will yield a lower coefficient of friction but are easier to clean. If desired, additional slip resistance can be added to the sealer. 100 mesh polypropylene will work well and should be applied in the second coat. It is best to mix it into the sealer and then applied with a T-Bar or the additive can be broadcast into the sealer. When slip-resistant additive is used, it is recommended to mix the sealer 1 to 1 with water to help keep the additive in solution. It is also recommended to apply a third coat of sealer to completely encompass and protect the additive.

WARNINGS

Use with proper ventilation. May cause eye and skin irritation. If you experience headaches, dizziness, or watery eyes, you may wear a NIOSH TC-84 respirator during application.

WARRANTY

Evaluate whether this product is suitable for your intended application. Conditions of product use are outside of our control and vary widely, the following is made in lieu of all express or implied warranties of merchantability. Our only obligation and your only remedy is replacement of product, at the option of HDIP INC. In no case will HDIP INC be liable for any direct, indirect, special, incidental, or consequential damages including lost profits, goodwill, or business opportunity.

