

A-H® SILICARBID

Enhancing Safety and Security While Delivering Beauty

TECHNICAL DATA SHEET

OVERVIEW:

A-H® Silicarbide is a specially crushed and graded silicon carbide grit that has been extensively used to produce a hard, non-slip coating and concrete surface that can also be made sparkling.

A-H® Silicarbide possesses high thermal conductivity, high strength at elevated temperatures and is the hardest commercially manufactured abrasive. It can be broadcast on coatings and concrete surfaces. A-H® Silicarbide is recommended for sidewalks, ramps, platforms, airport, railroad and bus terminals, and any other area where light reflective and/or non-slip properties are required for aesthetic and/or safety.

INTENDED USE:

A-H® Silicarbide is used in a number of applications in the concrete industry including:

1. As a “shake-on” or broadcast hardener for concrete surfaces to produce hard, non-slip concrete surfaces in floors, stair treads, ramps, loading docks, etc.
2. As a “shake-on” or broadcast decorative aggregates for concrete surfaces to produce aesthetic look, light reflective or sparkling, in concrete floors, walkways, ramps, etc.
3. As a broadcast aggregate for freshly coated surfaces to produce hard, non-slip properties required for safety or for chemical resistance.

BENEFITS:

A-H® Silicarbide is a specially manufactured, optical quality virgin silicon carbide in many complex bonded shapes. Specially crushed and graded A-H® Silicarbide is sparkly and extremely hard and has been extensively used and specified over many decades to produce hard, non-slip, sparkling or light reflective concrete surfaces.

TYPICAL PROPERTIES/PERFORMANCE DATA:

MECHANICAL PROPERTIES		THERMAL PROPERTIES					
Knoop Hardness	2580 (100 gm load)	Melting Point	2600°C sublimates				
Mohs Hardness	9.1+	Boiling Point	2815°C dissociates.				
Bending Strength	350 - 450 GPa	Thermal Expansion	4.3 µm/°C (25-1500°C)				
Compressive Strength	1035 - 1725 GPa	Thermal Conductivity	100 W/mk @ 25°				
Young's Modulus	410 GPa	TYPICAL CHEMICAL ANALYSIS					
Refractive Index	2.654	SiC	98.5%	SiO2	0.5%	Si	0.3%
Specific Gravity	3.22 gm/cc	Fe	0.08%	Al	0.1%	C	0.3%
Standard Color	Black or Blue-Black						

INSTALLATION:

SHAKE-ON FOR CONCRETE SURFACES

The concrete shall be properly placed and screeded. The floor shall be bull-floated and time allowed for the surface water to disappear, leaving the concrete slightly firm. Control joint spacing should be as recommended in ACI Standard 302-Concrete Floor and Slab Construction. After the concrete is firm, A-H® Silicarbide shall be broadcast evenly over the surface at the rate of 25 lbs. per 100 sq. ft. Application of up to 50 lbs. per 100 sq. ft. can be used, depending upon the amount of abrasion resistance and slip-proofing required.

Product should be applied uniformly in two separate shake coats. After the first coat is bull-floated, apply the second coat at a 90-degree angle to the first coat. The second coat should then be floated into the surface of the concrete. The slab shall then be finished to the specified finish. All slabs shall be cured for 7 days.

ETCHING CONCRETE SURFACES FOR NO-SLIP AND/OR SPARKLING/LIGHT REFLECTIVE PROPERTIES

For maximum exposure of A-H® Silicarbide grits or grains for maximum slip resistance and/or sparkling, concrete surfaces may be etched with a 10% solution of muriatic acid and subsequently flushed with water. Etching should not be done until the concrete has properly cured. Use proper safety precautions when working with acid for etching.

TEST SECTION

It is recommended to place a sample section of concrete prior to installation for approval.

RECOMMENDED DOSAGE:

25 lbs. to 50 lbs. A-H® Silicarbide per 100 square feet

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PRODUCTS & TECHNOLOGY FOR CONCRETE AND MASONRY WORLDWIDE SINCE 1904



For over 120 years, Anti-Hydro Products, LLC has been integrally waterproofing many concrete and masonry structures all over the globe. The success of our core product Anti-Hydro “AH-1”, has been attested not only by the commercial recognition accorded by its use in many prestigious projects worldwide, but also by tests performed by many governmental agencies and accredited independent laboratories.

Tel: +1-908-284-9000
Fax: +1-908-284-9464

45 River Road • Suite 300
Flemington NJ 08822-6036 USA

info@anti-hydro.com
www.anti-hydro.com



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