LAMBCO®

EMAG™20

Superior aluminum oxide emery aggregate

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Advantages:

- Near diamond hardness, increases abrasion resistance.
- Natural non-slip abrasive.
- Resists corrosion, acids, sugars, oils, and alkalis
- Heat Resistant
- Low absorption
- Non-pitting

Coverage:

- Light Duty & Non-slip 25 lbs per 100 ft^2 ($1.2kg/m^2$)
- Heavy Duty – 75 lbs per100 ft^2 ($3.7kg/m^2$)

See Coverage section for full details

Packaging:

50 lb (22.7kg) bag

Product Description

EMAG™20 is an aluminum oxide aggregate mined in Turkey and Canada. The material is then milled and processed in United States. It is a very hard aggregate of the mineral corundum (emery) variety that is crushed and specially graded into a mixture of sharp irregular particle sizes ranging from sieve sizes 14 - 36. EMAG™20 contains not less that 58% aluminum oxide and not more than 24% ferric oxide. It is a natural abrasive that instead of becoming smooth and slippery with wear, actually becomes more non-slip as it protrudes from the surface. EMAG™20 does not glaze over like other aggregates plus the irregular particle configuration and particle sizes provide a gripping action at the surface level. The wear resistant qualities exceed many times those of stone, gravel, sand, and various other materials often used in the construction of heavy duty, non-corrosive, slip-resistant surfaces. EMAG™20 is considered a non-metallic aggregate because of the high percentage of aluminum oxide in the product.

Always check the aluminum oxide content of competitive products. In most cases, other emery aggregate contains less than 30% aluminum oxide and varies considerably because it is not crushed from selected ore. Normal traprock has less than 10% aluminum oxide. High aluminum oxide ore is costly to drill, mine, blast and crush because it is so hard and tough, but it makes the best, most durable surface.

EMAG™20 is especially suited for stairs, ramps, walkways, and other areas where slippery surfaces are hazardous for people and vehicles. It is also recommended where good quality, dense, longwearing surfaces are desired.

The particle size ranges from 12 to 45 MESH with the majority in the range of 14 - 36. EMAG™20 is designed for use as a non-slip aggregate when seeded onto concrete before the initial set, or when seeded onto Lambert's epoxies while still tacky. EMAG™20 used as above should be embedded but not 100% totally sub-merged to assure slip-resistance.

To prevent excessive dusting of EMAG™20 treated concrete, surfaces may be treated immediately with Lambert's water-based hardening compound or 14 days after installation with Lambert's chemical concrete hardener. Contact Lambert for compatible hardening compounds.

Installation

Before using this product, please refer to the Material Safety Data Sheet for additional information. Proper handling precautions MUST be followed. The conditions of use, handling, and application of this product and information (whether verbal or written), including any suggested formulations and recommendations, are beyond Lambert Corporation's control. Therefore, it is imperative that testing be performed to determine satisfaction and suitability for intended use and health, safety, and environmental issues. The following information is meant as a guideline of best industry practices. While Lambert Corporation does suggest adherence to these guidelines, unforeseeable variables and/or developed successful installer practices may cause variation in methods and/or results.

Light Duty Shake-On Application:

For medium to light duty applications 25 lbs. EMAG™20 per 100 square feet ($1.2kg/m^2$) of surface area. The concrete shall be properly placed and screeded. Wood float to compact, level the surface and make one pass with trowel. As soon as the surface water has disappeared cast on EMAG™20 evenly over the surface at the rate of 25 lbs. per 100 square feet ($1.2kg/m^2$) of surface area. Float the EMAG 20 to embed it into the concrete. Care should be taken to embed the aggregate firmly into the surface of the concrete but not to bury it. The object is to leave a high

concentration of EMAG™20 at the surface - depth of 1/8-inch (3.2mm) to 1/4-inch (6.4mm). For maximum exposure of the EMAG™20, cured concrete may be acid etched with a 10% solution of muriatic acid and thoroughly flush with water.

Heavy Duty Shake-On Application:

Shake-On Mixture - For heavy duty applications over 25 lbs. per 100 square feet (1.2kg/m^2), EMAG™20 should be dry mixed with Type I Portland Cement, at a ratio of 94 lbs. (42.6kg) cement to 400 lbs. (181.4kg) EMAG™20 to make a shake-on mixture. If needed, additional cement may be added to the mix ratio to provide better shake-on workability. Maximum dry mix ratio is not to exceed 184 lbs. (83.5kg) cement to 400 lbs. (181.4kg) EMAG™20.

Application

After concrete has been placed, screeded, floated, and the surface water disappears; cast EMAG™20 and cement mixture uniformly over the surface using 50% of the total EMAG™20-cement mixture and float to embed the aggregates. When the surface water has again disappeared, repeat casting operation with the remaining EMAG™20-cement mixture. DO NOT OVERFLOAT. Trowel to desired finish. Total shake-on application rate is 60-80 lbs per 100 square feet (2.9-3.9kg/m^2) of surface area.

Cautions - Air-Entrained Concrete

Excessive air content in the concrete will frequently produce a very rubbery condition that is difficult to finish to a level, smooth surface. Unusually high amounts of air may separate from the mix and become entrapped in the form of bubbles below the surface being finished. These bubbles not only prevent trowelling the floor to a level surface but also can produce blisters. For heavy-duty traffic areas, concrete designed for at least 4500 PSI (31.0MPa) should be used. At temperatures below 60°F (15.6°C) or above 85°F (29.4°C), follow ACI Recommended Practices for Cold or Hot Weather Concreting.

Epoxy Shake-On Application:

Apply Lambert's epoxy is applied to the concrete substrate as per instructions. When the epoxy is applied and still tacky the EMAG™20 is broadcast onto the epoxy to completely cover the surface. EMAG™20 must be dry when used with epoxy. After the epoxy has completely set, all excess EMAG™20 should be swept off surface.

Technical Data

Physical Properties	
Crystallography	Polycrystalline to amorphous, dense, fine grained
Specific Gravity	3.5 (ASTM C 127)
Shape	Cubical, polyhedral
Hardness	MOH's Scale 8
Compressive Strength	60,000 lbs (27,215.5kg) tested on cubes

Typical Sieve Analysis	
Retained on #12 mesh sieve	Trace
Retained on #14 mesh sieve	1-15%
Retained on #20 mesh sieve	25-60%
Retained on #30 mesh sieve	20-40%
Retained on #45 mesh sieve	5-15%

Chemical Analysis	
Al_2O_3	58% Minimum
Fe_2O_3	24%
SiO_2	4%
TiO_2	3%
CaO	2%
L.O.I.	9%

Coverage

- Light duty and non-slip surfaces: Apply at the rate of 25 lbs per 100 ft^2 (1.2kg/m^2) surface area.
- Heavy Duty - 75 lbs per 100 ft^2 (3.7kg/m^2) of surface area

Clean-Up & First Aid

Clean-Up

Product can be cleaned up by sweeping, paying attention to minimizing the creation of excess dust.

First Aid

Eyes - wash with large amounts of water immediately.

Skin - wash affected area with soap and water.

Ingestion - Large quantities may cause intestinal obstruction.

Inhalation - Remove to fresh air. Get medical attention if necessary.

Precautionary Measures - Wear safety glasses and work gloves.

KEEP OUT OF REACH OF CHILDREN.
FOR INDUSTRIAL USE ONLY.