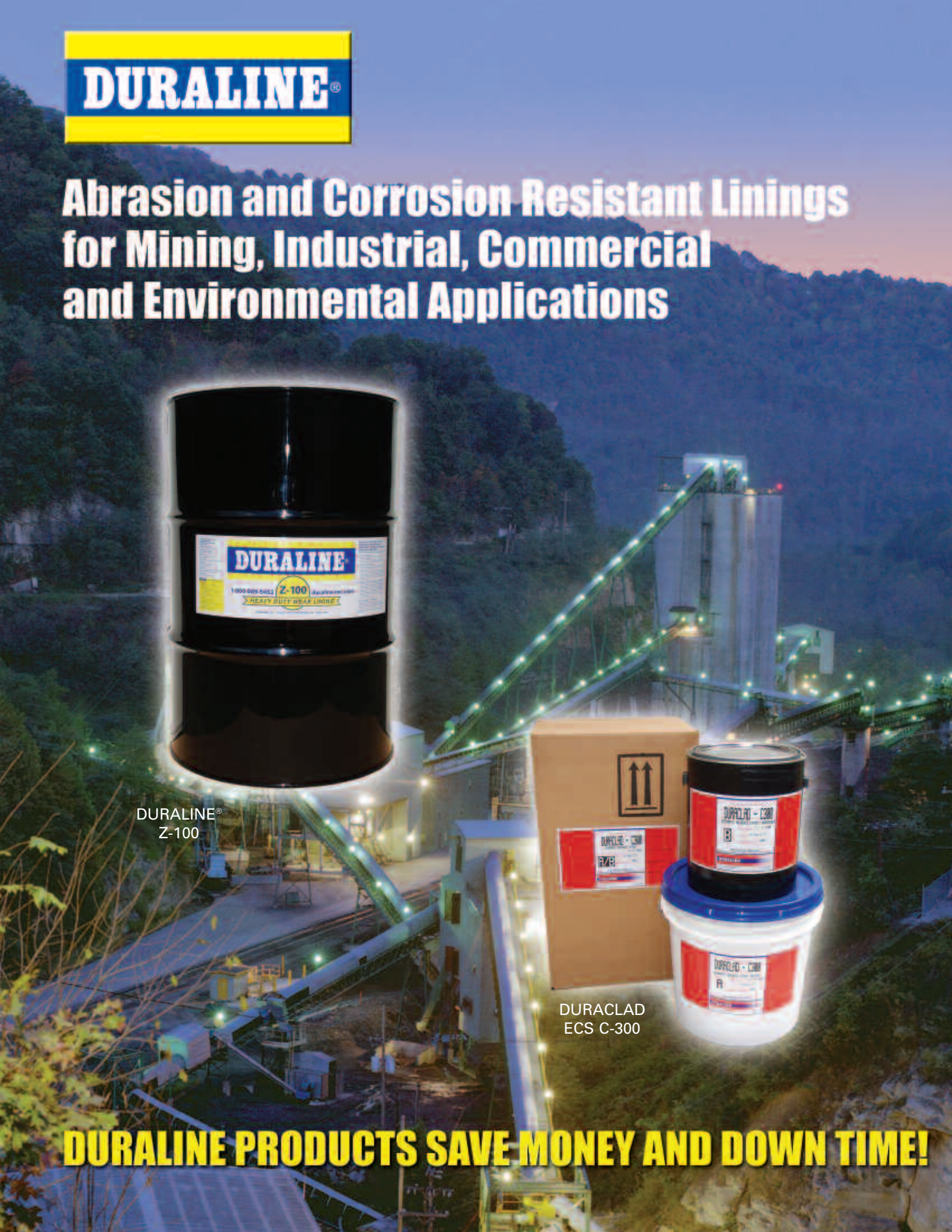
DURALINE®

Abrasion and Corrosion Resistant Linings for Mining, Industrial, Commercial and Environmental Applications



DURALINE®
Z-100

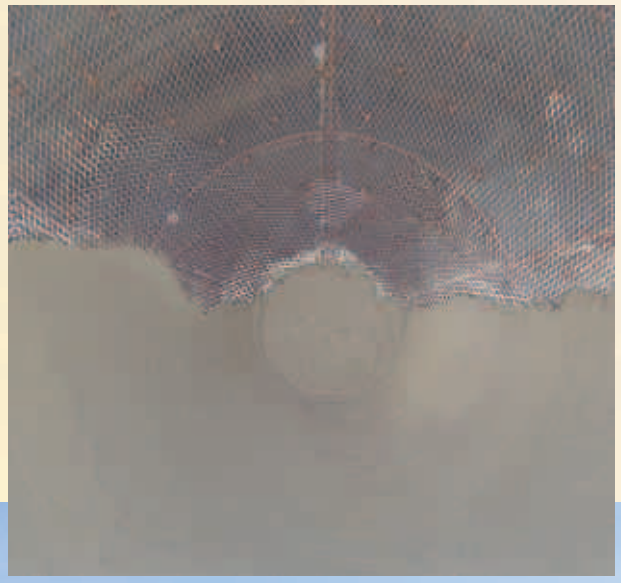
DURACLAD
ECS C-300

DURALINE PRODUCTS SAVE MONEY AND DOWN TIME!

DURALINE® Z-100

DURALINE® Z-100 LINING APPLICATIONS

- Sumps
- Coal and Minerals conveying and processing equipment
- Cyclones
- Baghouses
- Feeders
- Crushers
- Screens, Bed Pans
- Lined dust collecting systems
- Flumes
- Lined pipe systems
- Stacks
- Chutes
- Hoppers
- Silos



SPECIAL APPLICATIONS

- **Z-100** has 45 years proven success as a tough an durable heavy duty sump, bed pan, chute and hopper lining in the coal, mineral, and utility industries.
- **Z-100** is gunable for silo application.

EQUIPMENT APPLICATIONS

- **Z-100** is an excellent cost effective choice as a heavy duty wear resistant lining for a wide variety of industrial equipment.
- Many new equipment manufacturers choose **Duraline® Z-100** as their primary O.E.M. lining material.

AVAILABLE

- Standard - 650 lb. resealable 55 gallon steel drum.
- In drum equivalent (13) 50 lb. bags
- Skid quantity 52 bags, 2600 lb. total

Engineered Characteristics • Non Shrinking • Dimensionally Stable • Non Metallic •

DURALINE® Z-100

DURALINE Z-100 INSTALLATION INSTRUCTIONS

1. SURFACE PREPARATION

a. Surface to be lined must be cleaned free of all dirt, oil, grease, and flaking rust.
b. Wash surface with water and allow to dry completely. This should be done just prior to installation of wire mesh.

2. APPLICATION OF WIRE MESH

a. Use 1" x 2" or 2" x 2" x 3/32" diameter, or 18 gauge wire, or something similar in wire mesh.
b. Tack the wire mesh on 18" center, or there abouts, to the above prepared metal surface.
c. With a chisel, or some tool, raise (pry) the wire mesh away from the metal surface and insert a 1/2" thick nut, small metal scrap, or something to keep the mesh off the metal surface so that the mixed **DURALINE® Z-100** can get below the mesh, and thus the wire mesh will be imbedded in the desired thickness of the **DURALINE® Z-100**.

3. MIXING & APPLICATION OF Z-100 HEAVY DUTY LINING

a. Mix the **DURALINE Z-100** heavy duty chute lining as required in a mortar box with water. Add water sparingly as best results are obtained when consistency of mix is "stiff."
b. Apply over wire mesh, prepared above, to required thickness.
c. Finish surface with steel trowel.

4. CURING OF Z-100 HEAVY DUTY LINING

For best results, wet-cure for 72 hours.

a. Allow to dry at ambient temperature for 4-6 hours.
b. Apply cloth to surface and wet periodically over the next 48 hours.
c. Allow 18 to 24 hours drying (no water added) at ambient temperature prior to using.

Coverage of **DURALINE® Z-100** is 12 pounds per square foot at 1" thickness.

Installation Tips For DURALINE Z-100

Prepare a mortar mixer or similar mixing system that will thoroughly blend entire contents.

Temperature of Z-100 powder, the mixing water, and the surface to be protected should be 50°F or higher. 70°F is optimum.

DURALINE® Z-100 Mixing Ratio: 13% water by weight
650 lb. drum
84.5 lbs. – 10.13 gallons water

Procedure for mixing DURALINE Z-100

1. Make certain that ingredients (aggregate) are well distributed in drum.
2. Put required amount of water into mixer.
3. Add **DURALINE® Z-100** to mixer.
4. After adding all of the required **DURALINE® Z-100** into mixer, continue mixing for 5 minutes. Use a 5 minute mixing time on all batches to ensure uniformity.
5. Apply **DURALINE® Z-100**.

If you're NOT using an entire drum of **DURALINE® Z-100**:

1a) Weigh quantity of **DURALINE® Z-100** to be mixed.
1b) Measure corresponding amount of water needed.

1/2 drum Z-100 = 5.06 gal. Water

Non Conductive • Temperature Resistant • High Early Strength • Flows Easily • Trow

DURALINE®

DURALINE® Z-100
Heavy-Duty Lining

DURALINE® PRODUCT	PACKAGE UNIT/ KIT SIZE
DURALINE® Z-100	
DURALINE® Z-100 Heavy-Duty Lining	650 lbs. In Steel Drum
DURALINE® Z-100 Heavy-Duty Lining	Skid quantity, 52 50 lb. Multi-Layer Bags (Material equal to 4 traditional steel drums. 2600 lb. total)

NEW

QUICK CURE AND STRENGTH ADDITIVE

FOR THOSE APPLICATIONS WHERE "CURE TIME IS CRITICAL," DURALINE® OFFERS A MIX ADDITIVE THAT DRAMATICALLY SPEEDS UP CURE TIME AND ADDS STRENGTH

DURACLAD

Ceramic Beaded Epoxy Coating Systems

- Easy to use 1-to-1 mixing ratio
- New "All-in-One" packaging supplies clean mixing vessel
- Low odor formula
- No VOC's or Solvents
- Non-Sagging
- Ideal for repairs . . . superior adhesion
- Ceramic beads are pre-mixed in both parts . . . nothing else to add!

DURACLAD ECS C-300
Highly Economical Coating

Packaging: 2 gallon Kit, 26 lb.

DURACLAD ECS C-301 FS
Fast setting ceramic beaded coating.

Packaging:
(Sample Size)
2 one quart cans, 7.5 lb.

(Standard size)
2 gallon Kit, 26 lb.

DURACLAD ECS CERAMIC BEADED EPOXY SYSTEMS

DURACLAD C-300 Ceramic Beaded Epoxy Coating	2 Gallon Kit, 26 lb.
DURACLAD C-301 FS Fast Setting Ceramic Beaded Epoxy Coating (Sample Size Kit)	2 One Quart Cans 7.5 lb. Kit
DURACLAD C-301 FS Fast Setting Ceramic Beaded Epoxy Coating	2 Gallon Kit, 26 lb.
DURACLAD C-400 High Performance Ceramic Beaded Epoxy Coating	2 Gallon Kit, 26 lb.

DURACLAD ECS C-400
High Performance Ceramic Beaded Epoxy Coating

Packaging:
2 gallon Kit, 26 lb.

Engineered Characteristics • Non Shrinking • Dimensionally Stable • Non Metallic •

DURALINE®

DURACLAD ECS C-500
High Temperature Ceramic Beaded Epoxy Coating
Service temp 350°
Packaging: 2 gallon Kit, 26 lb.

DURALINE® PRODUCT	PACKAGE UNIT/ KIT SIZE
DURACLAD ECS CERAMIC BEADED EPOXY SYSTEMS	
DURACLAD C-500 HT High Temperature Ceramic Beaded Epoxy Coating	2 Gallon Kit, 26 lb.
DURACLAD C-1325 Brushable Ceramic Beaded Epoxy Coating	6 lb. Kit

DURACLAD ECS C-1325
Brushable Ceramic Beaded Epoxy Coating
Packaging:
2 one quart cans, 6 lb. Kit

IDEAL FOR THIN COAT – CLOSE TOLERANCE APPLICATIONS. AVAILABLE IN COLORS FOR CONTRASTING TWO COAT WEAR MONITORING.

Easy to spot on the shelf with DURACLAD Red, White and Blue boxes.

MADE IN U.S.A.

DURACLAD *Tile Adhesives*

DURACLAD ECS C-307
Tile Adhesive
Packaging:
2 one gallon cans,
21 lb. Kit

DURACLAD ECS C-307 FS
Fast Setting Tile Adhesive
Packaging:
2 one gallon cans,
21 lb. Kit

DURACLAD ECS C-507 HT
High Temperature Tile Adhesive
Packaging:
2 one gallon cans,
21 lb. Kit

DURACLAD TILE ADHESIVES / SPECIALTY ITEMS

DURACLAD C-307 Tile Adhesive	2 One Gallon Cans 21 lb. Kit
DURACLAD C-307 FS Fast Setting Tile Adhesive	2 One Gallon Cans 21 lb. Kit
DURACLAD C-507 HT High Temperature Tile Adhesive	2 One Gallon Cans 21 lb. Kit
DURACLAD C-304 FS Fast Setting Steel Putty	2.5 lb. Kit

Non Conductive • Temperature Resistant • High Early Strength • Flows Easily • Trow

DURALINE®

DURACLAD ECS INSTALLATION INSTRUCTIONS

DURALINE® Z-100 HEAVY DUTY LINING

Initial set time at 70°F	approximately 30 minutes
Initial cure time at 70°F	24 hours
Components	Dry powder with quartz aggregate, only water added at mixing time
Compressive strength (CRD-C-621)	
@ 24 hours	4,700 psi
@ 7 days	5,600 psi
@ 28 days	8,000 psi
Tensile strength (ASTM C-190)	600 psi
Flexural strength (ASTM C-293)	400 psi
Maximum service temp.	1200°F
Thickness	1" with wire mesh typical
Coverage	54 sq.ft. at 1"thick, 36 sq.ft. at 1-1/2" thick
Packaging	Per 650lb. steel drum

DURACLAD ECS C-300

Working time at 70°F	30 minutes
Cure time at 70°F	6-8 hours
Components	2 parts
Tensile strength (ASTM D-638)	5,500 psi
Compressive strength (ASTM D-695)	14,600 psi
Lap shear strength (ASTM D-1002)	2,100 psi
Heat deflection temp. (ASTM D-648)	153°F
Maximum service temp.	250°F
Specific gravity	1.7
Thickness	1/4" typical
Coverage	12.8 sq.ft. per unit at 1/4" thk. (typical) based on 26lb. unit size

DURACLAD ECS C-301 FS

Working time at 70°F	6 minutes
Cure time at 70°F	15-30 minutes
Components	2 parts
Compressive strength (ASTM D-695)	13,600 psi
Tensile strength (ASTM D-683)	3,800 psi
Maximum service temp.	250°F
Thickness	1/4" typical
Coverage	12.8 sq.ft. per unit at 1/4" thk. (typical) based on 26lb. unit size

1. Surface shall be dry and free of all surface scale, rust, oils or other matter that may affect adhesion of the epoxy compound.

   Prepare the surface by grinding to remove existing coatings or adhesives and sandblast entire surface to provide a roughened white metal surface. Wipe surface with clean cloth soaked with a non-petroleum-based solvent.

2. Empty contents of Part A (resin) into mixing bowl containing Part B (hardener). Use power drill mixer to blend the components until uniform in color. Scrape sides and bottom of pail to insure proper ratio. Do not exceed mixing over 3 minutes: for lesser quantities mix 1 Part (A) and 1 Part (B) on separate board with trowel until uniform in color.

3. Maintain components between 65° and 80°F. Apply a thin layer of mixed **DURACLAD ECS** and rub into the surface. Proceed to build up with layers of 1/4" – 1/2" to desired thickness.

4. The cure can be accelerated by pre-heating Part A (resin) to 100°F before mixing. Caution: This procedure will shorten the pot life of the material due to the temperature sensitivity of epoxy resins.

5. A smooth, slick surface can be accomplished by dipping your trowel in the solvent then smoothing over already applied, uncured **DURACLAD ECS**. Clean tools with solvent.

6. Do not apply material below 50°F ambient temperature, unless surface and material is maintained above 80°F to insure proper adhesion.

Engineered Characteristics • Non Shrinking • Dimensionally Stable • Non Metallic •

DURALINE® DURACLAD ECS

CERAMIC BEADED EPOXY SYSTEM

DURACLAD ECS C-300

- **C-300** is a high performance ceramic-beaded 100% solids epoxy coating/lining system.
- An engineered composite of resins and a network of specifically sized ceramic beads.
- Superior abrasion and corrosion resistance
- Maximum service temp. 250°F.

TYPICAL USES

- Pump Casings
- Vibrating Screens and Beams
- Wear Plates
- Repair Broken Tiles
- Hoppers and Chutes
- Cyclones
- Pipe Elbows
- Augers, Fan and Impeller Blades
- Dust Collection System
- Pneumatic Conveyors
- Heat Exchangers and Tube Sheets
- Tile Corners and Transition Areas

FAST-SET CERAMIC BEADED EPOXY

DURACLAD ECS C-301 FS is conveniently packaged in two kit sizes
- Standard - 2 Gal / 26 lb. kit
- Sample - 2 qt. / 7 lb. kit

DURACLAD ECS C-301 FS

- **DURACLAD ECS C-301 FS** is a specifically formulated epoxy system blended with high fired ceramic beads and accelerated resins to provide a fast setting compound for immediate protection of surfaces subjected to abrasion and corrosion. Easy to mix 1 to 1 by volume ratio. Cures in as little as 15 minutes.
- **DURACLAD ECS C-301 FS** is ideal for emergency repairs and will minimize downtime of critical equipment and process lines.
- **DURACLAD ECS C-301 FS** is waterproof and resistant to most chemicals and solvents. It is also non-sagging for repair of vertical surfaces and overhead patching.

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DURALINE®

HEAVY DUTY INDUSTRIAL FLOOR MATERIALS

HD-100 IF

If you are looking for a Heavy Duty Industrial Floor, **HD-100 IF** is the right material for the job. Not just a floor topping or paint, the wear resistance goes all the way through the **HD-100 IF** floor structure.

HD-100 IF is Highly Recommended for new floor structures as well as re-surfacing of worn and damaged Industrial floors.

RECOMMENDED FOR MINING OPERATIONS, TRASH INCINERATION AND RECYCLING PLANTS.

RECOMMENDED FOR METALS PLANTS

This material was recently used by a Metal Producer in molten metals area to replace a damaged floor with great success. They now run heavy equipment carrying hot metal over their DURALINE® HD-100 IF floor area.

HD-100-IF CAN BE SUPPLIED WITH SYNTHETIC OR SS REINFORCING FIBERS

ENGINEERED CHARACTERISTICS:

- Non Shrinking
- Temperature Resistant
- Dimensionally Stable
- High Early Strength

NEW

QUICK CURE AND STRENGTH ADDITIVE

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HD-200 IF

For Extreme Special Abrasion and Corrosion duty, DURALINE® also offers a Premier Severe Duty EPOXY POLYMER FLOOR CONCRETE named **HD-200-IF**.

This material is extremely abrasion and corrosion resistant and is aimed at the most challenging applications.

DURALINE® PRODUCT	PACKAGE UNIT/ KIT SIZE
DURALINE HD-200-IF HEAVY DUTY INDUSTRIAL FLOOR-EPOXY POLYMER CONCRETE	
Standard Kit	1.3 cu ft unit, 185 lb./unit
Large Kit	2.7 cu ft unit, 369 lb./unit
DURALINE HD-200-IFP PREP KIT	
Standard Kit	1 gal. unit
Large Kit	3 gal. unit

FL-D 201-SL (Self Leveling)

DURALINE® offers a superior corrosion-resistant, self leveling, epoxy monolithic floor protection system for concrete industrial and commercial floor applications, the system works with **DP501 Primer** and **D200** Expansion joint material to provide a high quality surface.

FOR OVER 45 YEARS DURALINE® HAS MEANT SUPERIOR QUALITY ABRASION SOLUTIONS

DURALINE®

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