

DuraSeal™



Wastewater
Solutions



Environmental
Results 



A dynamic splash of clear blue water against a light blue background, with numerous bubbles and droplets scattered throughout the scene.

DuraSeal™

SOLUTIONS for the
Restoration and Protection
of Wastewater Structures

Clean Water **IS WHAT WE'RE** **ALL ABOUT**

DuraSeal has over 25 years experience in the research, design, installation, manufacturing and marketing of wastewater restoration products.

Our line of specialty products provide a full system solution for the repair and protection of wastewater structures. Products that seal against infiltration, exfiltration & corrosion with a 10 to 50 year design life for both brick and concrete wastewater structures.

We are a single source supplier for the municipal wastewater market. For new construction, collection system or treatment facilities we have the products for your restoration project.

For more information:
Contact us at 888-893-0007
or visit our website at
www.DuraSealUSA.com

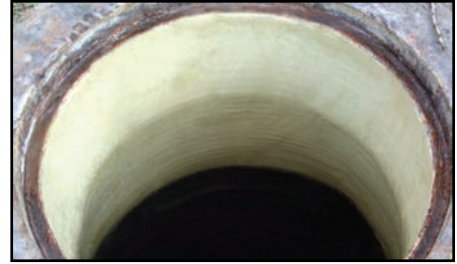
DuraSeal™



The complete system for wastewater structure restoration

STOP
infiltration
& exfiltration

PROTECT
against corrosion



PRODUCT Overview

DuraSeal PM is a single component, fiber reinforced, shrinkage compensated, high strength lining mortar for moderate corrosion protection.

DuraSeal CA is a single component, pure fused calcium aluminate cement, fiber reinforced, shrinkage compensated, high strength lining mortar for severe corrosion protection.

DuraSeal RM is a high early compressive strength repair mortar featuring a rapid set time.

DuraSeal Plug is a single component blend of select cements and admixtures designed specifically for infiltration control.

DuraFlex is a single component, moisture tolerant, flexible sealant providing 800% elongation, engineered for long term repeated movement due to freeze thaw cycles. Designed for the sealing of manhole chimneys and catch basins, based upon a proprietary hybrid polymer.

DuraLine is a high build, two component, 100% solids, moisture tolerant epoxy coating designed specifically for outstanding corrosion protection of both brick and concrete wastewater structures.

DuraLine MP is a 100% solids, low viscosity, moisture tolerant, two component epoxy primer designed specifically to improve the surface bonding characteristics of both DuraFlex and DuraLine.

For product specifications contact us at 888-893-0007 or visit our website at www.DuraSealUSA.com.

TECHNICAL DATA

DuraSealTM PM

DuraSeal PM is a single component, fiber reinforced, shrinkage compensated, high strength repair mortar, designed specifically for the rehabilitation of both brick and concrete wastewater structures.

Recommended Uses:

- Relining of brick, block and masonry surfaces in manholes, pipes and other wastewater structures.
- Tunnels
- Containment structures
- WWTP
- Designed specifically for the rehabilitation of underground wastewater structures.

Benefits / Features:

- Single component
- High compressive and flexural strengths
- Spray applied
- Low permeability
- Low rebound

Typical Performance Data:

Compressive Strength	ASTM C109	
1 Day	4,000 PSI	
28 Day	8,000 PSI	
Flexural Strength	ASTM C348	28 Day - 2,000 PSI
Tensile Strength	ASTM C496	28 Day - 900 PSI
Shrinkage	ASTM C596	28 Day - 0%
Bond Strength	ASTM C321	28 Day - Brick Failure Before Bond
Freeze Thaw Resistance	ASTM C666	100 Cycles No Visible Damage
Density	135 +/- 5	
Set Time	ASTM C266	
Initial Set	2 Hours	
Final Set	4 Hours	

Shelf Life: 6-12 months (dry covered storage). High humidity will reduce shelf life.

Yield: One (60) pound bag yields approximately .54 cubic feet.

Surface Preparation: Substrate must be structurally sound, free of oil, grease, coatings, rust and loose concrete. Water blast 3500 PSI or sand blast to remove all contaminants. Do not use when less than 40°F. Apply to a clean damp surface, free of any standing water.

Mixing: Using rubber gloves, respirator or filter mask and appropriate eye protection. Use approximately 3-4 quarts of potable water per each 60 pound bag of DuraSeal PM. First add up to 90% of the potable water into the mixer, then add DuraSeal PM and the remaining mix water as required. Mix until a homogeneous consistency is achieved. Water may be chilled to maximize working time.

Application: Use only approved mixing and low pressure spray application equipment.

Curing: Properly cure in strict accordance with ACI recommendations. Apply a curing compound per the moisture retention requirements of ASTM C309 or cure in moist environment for 7 days.

Warranty: This product is guaranteed and warranted to be of good quality. DuraSeal will, at it's sole discretion, replace this product if proven defective when stored, mixed and applied in strict accordance with DuraSeal technical product specification guidelines. DuraSeal offers no guarantee, express or implied for a particular purpose or performance.



DuraSealTM CA

DuraSeal CA is a single component, pure fused calcium aluminate cement, fiber reinforced, shrinkage compensated, high strength repair mortar, designed specifically for superior corrosion protection of both brick and concrete wastewater structures.

Recommended Uses:

- Relining of brick, block and masonry surfaces in manholes, pipes and other wastewater structures.
- Tunnels
- Containment structures
- WWTP
- Designed specifically for the rehabilitation of underground wastewater structures.

Benefits / Features:

- Single component
- Superior corrosion protection
- High compressive and flexural strengths
- Spray applied
- Low permeability
- Low rebound

Typical Performance Data:

Compressive Strength	ASTM C109	
28 Day	9,000 PSI	
Flexural Strength	ASTM C348	28 Day - 1,250 PSI
Tensile Strength	ASTM C496	28 Day - 800 PSI
Shrinkage	ASTM C596	28 Day - 0%
Bond Strength	ASTM C321	28 Day - Brick Failure Before Bond
Freeze Thaw Resistance	ASTM C666	100 Cycles No Visible Damage
Density	135 +/- 5	
Set Time	ASTM C266	
Initial Set	90 Minutes	
Final Set	180 Minutes	

Shelf Life:

6-9 months (dry covered storage). High humidity will reduce shelf life.

Yield:

One (60) pound bag yields approximately .54 cubic feet.

Surface Preparation:

Substrate must be structurally sound, free of oil, grease, coatings, rust and loose concrete. Water blast 3500 PSI or sand blast to remove all contaminants. Do not use when less than 40°F. Apply to a clean damp surface, free of any standing water.

Mixing:

Using rubber gloves, respirator or filter mask and appropriate eye protection. Use approximately 3-4 quarts of potable water per each 60 pound bag of DuraSeal CA. First add up to 90% of the potable water into the mixer, then add DuraSeal CA and the remaining mix water as required. Mix until a homogeneous consistency is achieved. Water may be chilled to maximize working time.

Application:

Use only approved mixing and low pressure spray application equipment.

Curing:

Properly cure in strict accordance with ACI recommendations. Apply a curing compound per the moisture retention requirements of ASTM C309 or cure in moist environment for 7 days.

Warranty:

This product is guaranteed and warranted to be of good quality. DuraSeal will, at it's sole discretion, replace this product if proven defective when stored, mixed and applied in strict accordance with DuraSeal technical product specification guidelines. DuraSeal offers no guarantee, express or implied for a particular purpose or performance.

TECHNICAL DATA

DuraSealTM RM

DuraSeal RM is a high early compressive strength repair mortar featuring a rapid set time, designed specifically for the rehabilitation of both brick and concrete wastewater structures.

Recommended Uses:

- Repair large defects in manholes, pipes and other masonry structures.
- Bench and invert repair.
- Designed specifically for the rehabilitation of underground wastewater structures.

Benefits / Features:

- Single component
- Rapid setting
- High 28 day strength
- Non shrinking

Typical Performance Data:

Compressive Strength	ASTM C109	
2 Hours	2,000 PSI	
1 Day	4,000 PSI	
28 Day	7,000 PSI	
Flexural Strength	ASTM C293	
28 Day	1,200 PSI	
Bond Strength	ASTM C321	28 Day - Brick Failure Before Bond
Freeze Thaw Resistance	ASTM C666	100 Cycles No Visible Damage
Set Time	ASTM C266	
Initial Set	10 Minutes	
Final Set	20 Minutes	

Shelf Life:

6-12 months (dry covered storage).
High humidity will reduce shelf life.

Yield:

One (60) pound bag yields
approximately .50 cubic feet.

Surface Preparation:

Substrate must be structurally sound, free of oil, grease, coatings, rust and loose concrete. Water blast or sand blast to remove all contaminants. Do not use when less than 40°F. Apply to a clean damp surface, free of any standing water.

Mixing:

Using rubber gloves, respirator or filter mask and appropriate eye protection, mix one 50 lb bag of DuraSeal RM thoroughly with up to three quarts (3) of potable water in a suitable container for 3-5 minutes. Water may be chilled or heated in order to adjust working time. Do not exceed maximum amount of water needed in order to avoid aggregate separation. Do not exceed maximum amount of water needed in order to yield highest compressive strength. Working time is approximately 15 minutes from the introduction of water and may depend upon air temperature, humidity, and wind conditions.

Application:

Material may then be troweled into place.

Warranty:

This product is guaranteed and warranted to be of good quality. DuraSeal will, at it's sole discretion, replace this product if proven defective when stored, mixed and applied in strict accordance with DuraSeal technical product specification guidelines. DuraSeal offers no guarantee, express or implied for a particular purpose or performance.



DuraSealTM PLUG

DuraSeal Plug is a single component blend of select cements and admixtures designed specifically for infiltration control of both brick and concrete wastewater structures.

Recommended Uses:

- Repair active leaks in manholes, pipes and other masonry structures.
- Foundations
- Concrete walls, tanks and pits

Benefits / Features:

- Single component
- Rapid setting
- Hand applied

Typical Performance Data:

Compressive Strength	ASTM C109
2 Hour	1,400 PSI
28 Day	6,500 PSI
Bond Strength	ASTM C321
60 Minutes	60 PSI
24 Hours	80 PSI
Set Time:	60-90 seconds

Shelf Life:

6-12 months (dry covered storage).
High humidity will reduce shelf life.

Yield:

One (50) pound pail yields approximately .45 cubic feet.

Surface Preparation/Application:

Substrate must be structurally sound, free of oil, grease, coatings, rust and unsound concrete for the successful application of DuraSeal Plug. Prepare leak by chiseling or drilling to ½" to ¾" depth and width depending on size of leak to be repaired. Using rubber gloves, respirator or filter mask and appropriate eye protection, apply DuraSeal Plug generously to prepared surface with a gentle packing motion, then apply firm pressure for 30-45 seconds. Repeat process until leak is stopped, then patching with DuraSeal RM for a more permanent seal.

Warranty:

This product is guaranteed and warranted to be of good quality. DuraSeal will, at it's sole discretion, replace this product if proven defective when stored, mixed and applied in strict accordance with DuraSeal technical product specification guidelines. DuraSeal offers no guarantee, express or implied for a particular purpose or performance.



TECHNICAL DATA

DuraFlex™

DuraFlex is a highly flexible, single component, ambient curing product based on a proprietary hybrid polymer designed specifically for sealing manhole chimneys in municipal wastewater structures.

Recommended Uses:

- Sealing manhole chimneys
- Precast joints
- Catch basins

Benefits / Features:

- Single component
- Highly flexible
- 100 % solids
- Designed to remain flexible through repeated movement in freeze/thaw cycles

Typical Performance Data:

Elongation	800%	ASTM D-412
Tensile Strength	200 psi	ASTM D-412
Hardness Shore A	35 psi	ASTM D-412
Low Temperature Flex	-20 F.	ASTM D-412
Service Temperature	-40 F. to 300 F.	
Set Time:		
Initial Set	40 Minutes	
Final Set	30 Days	

Shelf Life: 6-12 months unopened containers stored between 60° F. and 80° F.

One Gallon Yield: Will cover approximately 9.44 sf @ 170 mils on a smooth surface.

Surface Preparation: Substrate must be properly cured, structurally sound, free of voids, cracks, spalls, oil, grease, coatings, rust and loose concrete. Water blast 3500 - 5000 PSI with 0° turbo nozzle, sand blast or use mechanical abrasion to remove all contaminants to a clean sound surface with a 4 mil profile. No application should be attempted when less than 40°F. Apply to a clean, dry surface, free of any standing water.

Primer: Refer To DuraLine MP Technical Data Sheet and DuraLine Specification for Complete Installation Guidelines. Approximate 5-8 mils thickness.

DuraFlex Application: DuraFlex is a single component flexible sealant. No mixing is required. Using stiff paint brush or trowel, apply DuraFlex at minimum 170 mils taking care not to apply DuraFlex to any unprimed area.

Curing: Do not perform any manhole exfiltration or vacuum testing until after the 30 day cure time.

Warranty: This product is guaranteed and warranted to be of good quality. DuraSeal will, at it's sole discretion, replace this product if proven defective when stored, mixed and applied in strict accordance with DuraFlex specification guidelines. DuraSeal offers no guarantee, express or implied for a particular purpose or performance.



DuraLine™

DuraLine is a high build, two component, 100% solids, moisture tolerant epoxy coating designed specifically for outstanding corrosion protection of both brick and concrete wastewater structures.

Recommended Uses:

- Relining of brick, block and masonry surfaces in manholes, pipes and other wastewater structures.
- Tunnels
- Containment structures
- WWTP
- Designed specifically for the ultimate corrosion protection of underground wastewater structures.

Benefits / Features:

- 100% solids
- Outstanding corrosion protection
- High compressive and flexural strengths
- Spray applied
- Moisture tolerant
- Excellent adhesion
- Installed by certified applicators

Typical Performance Data:

Compressive Strength	ASTM C695	10,370 PSI
Tensile Strength	ASTM D638	7,600 PSI
Tensile Elongation	ASTM D638	3.2
Flexural Strength	ASTM D790	13,600
Hardness, Shore	D ASTM D2240	80

Shelf Life:

12 months (cool, dry covered storage).

Coverage:

Approx. 12.84 sf per gallon/smooth surface

Surface Preparation:

Refer To DuraLine Specification For Complete Installation Guidelines. Substrate must be structurally sound, free of oil, grease, coatings, rust and loose concrete. Water blast 5000 PSI 0° turbo nozzle or sand blast to remove all contaminants achieving an average 3 mil profile. Do not use when less than 40°F. Apply to a clean dry to damp surface, free of any standing water droplets.

Primer:

Refer To DuraLine MP Technical Data Sheet And Duraline Specification For Complete Installation Guidelines. Approximate 5-8 mils thickness

Mixing:

1. Heated Plural Component Spray Application Equipment.
2. Mechanically mix 1:1 by volume, adding hardener to resin and thoroughly blend to ensure proper mix.

Application:

1. Heated Plural Component Spray Application Equipment.
2. Hand trowel.

Working time:

45°F	45 Minutes
70°F	30 Minutes

Warranty:

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Packaging:

10 and 100 gallon units.

TECHNICAL DATA

DuraLineTM MP

DuraLine MP is a 100% solids, low viscosity, moisture tolerant, two component epoxy primer designed specifically to improve the surface bonding characteristics of both DuraFlex and DuraLine.

Recommended Uses:

- Relining of brick, block and masonry surfaces in manholes, pipes and other wastewater structures.
- Tunnels
- Containment structures
- WWTP
- Designed specifically for the ultimate corrosion protection of underground wastewater structures.

Benefits / Features:

- 100% solids
- Outstanding corrosion protection
- Low viscosity
- Hand applied
- Moisture tolerant
- Excellent adhesion
- Installed by certified applicators

Typical Performance Data:

Type Epoxy
Tensile Strength ASTM D638 3,100 PSI
Color Choice of White or Gray
Adhesion to Concrete ASTM D4512 Substrate Failure
Weight Per Gallon 9 lbs

Shelf Life:

12 months (cool, dry covered storage).

Coverage:

Approx. 150-200 sf per gallon/smooth surface. Depending on porosity of substrate.

Surface Preparation:

Refer To DuraLine Specification For Complete Installation Guidelines. Substrate must be structurally sound, free of oil, grease, coatings, rust and loose concrete. Water blast 5000 PSI 0° turbo nozzle or sand blast to remove all contaminants achieving an average 3 mil profile. Do not use when less than 40°F. Apply to a clean dry to damp surface, free of any standing water droplets.

Primer Thickness:

Approximate 5-8 mils thickness.

Mixing:

Mechanically mix 3:1 by volume, adding hardener to resin and thoroughly blend using an explosion proof drill to ensure proper mix.

Application:

Apply DuraLine MP 5-8 mils using brush or short nap roller. Apply to a clean dry to damp surface, free of any standing water droplets. Apply DuraLine epoxy coating within 3-8 hours.

Working Time:

45°F 45-60 Minutes
70°F 20-30 Minutes

Cautions:

DuraLine MP Resin is combustible. Keep away from all sources of ignition during mixing, application & cure. DuraLine MP Hardener is corrosive and can cause eye and skin irritation and allergic reactions. The use of goggles, fresh air masks or NIOSH approved respirators, protective skin cream and protective clothing is recommended standard practice when spraying coatings. Proper ventilation is always required.

Warranty:

This product is guaranteed and warranted to be of good quality. DuraSeal will, at it's sole discretion, replace this product if proven defective when stored, mixed and applied in strict accordance with DuraLine specification guidelines. DuraSeal offers no guarantee, express or implied for a particular purpose or performance.

Packaging:

4 Gallon Units



EQUIPMENT Options

We offer a complete line of mixing, pumping and spraying equipment to apply the products we manufacture. Also, custom trailer or truck mounted equipment options can be custom designed to facilitate use with contractors existing equipment.

- Custom Spray Equipment For Restoration Mortars
- Rotary Spray – Centrifugal Application
- Heated Plural Component Application Equipment

APPLICATOR Training

To help ensure the quality performance of each product, contractor certification training is provided for material handling, equipment, surface preparation, product application and testing.

TECHNICAL Support

We offer a full system solution from product testing and development, application equipment, certified field training and testing as well as customer support.

For more information:
Contact us at 888-893-0007
or visit our website at
www.DuraSealUSA.com

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701 Brazos Street, Suite 500 • Austin, TX 78701

Toll Free: 888-893-0007

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