

DUROMAR[®]

WATER TREATMENT APPLICATIONS

Protecting Critical Water Infrastructure from Corrosion, Erosion and Chemical Degradation using Duromar[®] systems





Of all the challenges that can affect a modern wastewater treatment facility, corrosion and chemical degradation remain the most persistent—and the most demanding for plant designers, operators, and maintenance teams. Wastewater environments present a highly aggressive combination of solids, liquids, gases, microbial activity, and fluctuating pH levels, creating conditions where surfaces are continuously exposed to chemical attack, abrasion, and biological corrosion.

Since the early development of advanced wastewater infrastructure, Duromar® has been deeply involved in addressing corrosion, erosion, and process-control issues across clarifiers, aeration basins, digesters, wet wells, and associated pipelines.

Duromar® recognized early on that the most effective way to combat these diverse and severe challenges is through the use of 100% solids, multi-functional and novolac epoxy systems—engineered to withstand harsh chemical exposure, sludge abrasion, microbial-induced corrosion (MIC), and continuous wet service, ensuring long-term asset reliability in wastewater treatment operations.

Arudra Engineers Pvt Ltd - in technical collaboration with Duromar Inc (USA), is a licensed Manufacturer, Distributor & Applicator of Duromar® range of products.

Quality, Safety & Compliance





Waste Water Treatment Applications

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| 2 Digestors | 7 De-watering Tanks | 12 Sewer Lines/Pipes/Tunnels |
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| 4 Acid/Chemical Storage Tanks | 9 Pumps | 14 Trenches |
| 5 Clarifier Tanks | 10 Secondary Containment | |

“Stop the costly cycle of temporary fixes and premature replacements in your water treatment facility. Duromar coatings provide a permanent, high-performance solution for repairing and rebuilding critical concrete and steel assets, specifically engineered to defeat the toughest challenges like Microbial Induced Corrosion (MIC), abrasion, and aggressive chemical attack. By choosing Duromar's specialized polymers, you not only restore the structural integrity of lift stations, clarifiers, and pumps, but also create a durable, non-permeable barrier that maximizes asset lifespan, reduces operational downtime, and ensures long-term regulatory compliance, offering a superior return on your maintenance investment.”

Aeration Tanks

Aeration tanks are the heart of the biological treatment process in wastewater treatment plants (WWTPs). In these large basins, air or oxygen is continuously introduced to support aerobic microorganisms that digest organic pollutants, reduce BOD/COD, and stabilize waste streams. Mechanical surface aerators or diffused air systems create intense mixing to keep biomass in suspension and maintain optimal oxygen transfer efficiency.

Because aeration tanks operate under constant exposure to water, aggressive chemicals, suspended solids, and high turbulence, they represent one of the most corrosion- and erosion-prone zones within a WWTP.

Solution

Duromar® EAC

DUROMAR® EAC is a brush-applied maintenance material offering excellent resistance to acids, caustics, and abrasion, ideal for resurfacing tanks, heat exchangers, and pump or valve components.

Duromar® SAR

DUROMAR® SAR is an easy-to-use rebuilding putty with excellent abrasion and chemical resistance, heavily filled with aluminum oxide and suitable for restoring pump casings, slurry tanks, weld seams, and worn metal components.

Duromar® HPL-2510

DUROMAR® HPL-2510 is a versatile, easy-to-use 100% solids coating for circulating water pipes, sewage treatment systems, and process water tanks, applicable by brush, roller, or conventional spray.

Duromar® HPL-2221

DUROMAR® HPL-2221 is a medium-viscosity coating offering excellent abrasion, impact, and chemical resistance with flexibility, suitable for rail cars, slurry tanks, ash hoppers, and secondary containment, and applied by hand or plural-component spray.



Digestors

Digesters are critical wastewater treatment units that stabilize sludge by breaking down organic matter through anaerobic or aerobic processes. Operating under high temperatures, chemical exposure, continuous mixing, and abrasive sludge flow, they are among the most corrosive and mechanically demanding structures in a WWTP.

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Anti-Slip Surfaces

Anti-slip surfaces are a critical safety feature throughout wastewater treatment plants (WWTPs). Areas such as walkways, pump rooms, clarifier decks, aeration tank perimeters, digester access platforms, chemical dosing rooms, and stair treads are continuously exposed to water, sludge splashes, chemicals, and biological growth — creating extreme slip hazards.

Solution

Duromar® DF-1301

DUROMAR DF-1301 is a clear, 100% solids concrete sealer with a long working time. It is used primarily to seal the concrete prior to the application of additional topcoats and to restore the mechanical properties of old concrete. It can be cured at temperatures as low as 40° F and can be applied to damp concrete.

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Duromar® DUROFIL

DUROMAR® DUROFIL is a specially formulated 100% solids epoxy grout and rebuilding product for filling holes and rebuilding severely chemically attacked concrete floors and secondary containment areas. DUROFIL provides an excellent base for other DUROFLOR® products, such as CHEMCRETE, DF-4301, etc., where more acid resistance or a smoother finish is required.

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Acid/Chemical Storage Tanks

Acid and chemical storage tanks are essential components in wastewater treatment plants (WWTPs), used to store chemicals for pH correction, coagulation, disinfection, odor control, and sludge conditioning.

Solution

Duromar® EXP

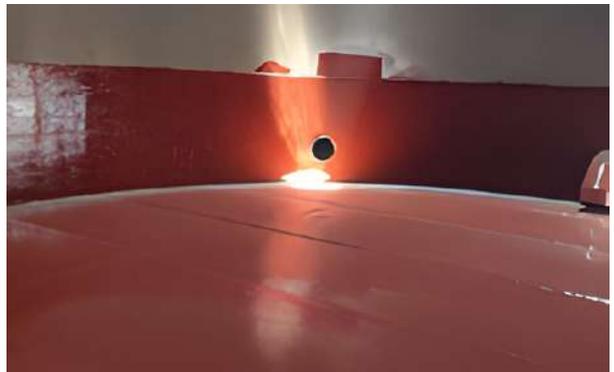
DUROMAR EXP is a higher chemical and temperature resistant version of the EAC used in the most aggressive of chemical environments. It's used to resurface heat exchangers, valves, or pump internals.

Duromar® EXP-Thixset

DUROMAR EXP-THIXSET is a more chemical and higher temperature resistant version of either SAR or HAR used primarily in areas operating at higher temperatures and requiring better chemical resistance. Applications include acid tank repair, boiler skirts or refinery evaporator vessels.

Duromar® HPL-2510

DUROMAR® HPL-2510 is an outstanding, versatile and easy to use 100% solids material. It can be used for circulating water pipe, sewage treatment systems, or process water tanks. It can be applied by brush, roller or with conventional spray equipment.



Clarifier Tanks

Clarifier tanks play a critical role in wastewater treatment by separating suspended solids from treated water through sedimentation. Located after primary or secondary treatment stages, clarifiers receive high-flow wastewater containing biological matter, sludge, grit, and abrasive particulates. Their performance directly impacts effluent clarity, sludge management efficiency, and the overall reliability of the treatment process.

Solution

Duromar® EXP

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Duromar® HPL-4310

DUROMAR® HPL-4310 is a high functionality, 100% solids novolac material, which can be applied by conventional airless spray equipment. It can be used in power plant outlet ducts, utility systems, petrochemical and acid storage tanks, or anywhere requiring outstanding chemical resistance in an easy to apply coating system.



Demineralized Water Tanks

Demineralized (DM) water tanks are integral components within industrial and municipal water treatment facilities, typically used to store water that has undergone ion exchange or reverse osmosis to remove dissolved minerals, salts, and ionic impurities. DM water supports critical operations such as boiler feedwater, process water for manufacturing, high-purity cleaning, and laboratory or pharmaceutical applications.

Solution

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De-watering Tanks

De-watering tanks are used to separate water from sludge, reducing its volume for easier handling, transportation, and disposal. These tanks support critical operations such as sludge thickening, solids settling, filtration, and mechanical separation processes like centrifuges, belt presses, screw presses, and vacuum filters.

Solution

Duromar® EAC

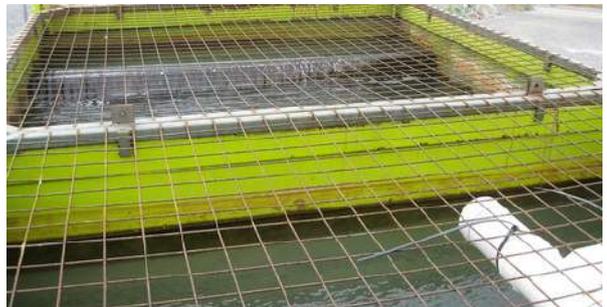
DUROMAR® EAC is a brushable and versatile maintenance material, which has excellent resistance to both acids and caustics as well as having excellent abrasion resistance. It is primarily used to resurface any component requiring both abrasion and chemical resistance such as tanks, heat exchangers, valve or pump internals.

Duromar® SAR

DUROMAR® SAR is a versatile easy-to-use rebuilding putty with excellent abrasion and chemical resistance. This product is heavily filled with aluminum oxide and can be built up to an inch in thickness or more. Typical applications are for rebuilding of pump casings, slurry tanks, weld seams or anywhere requiring the restoration of metal components.

Duromar® HPL-2510

DUROMAR® HPL-2510 is an outstanding, versatile and easy to use 100% solids material. It can be used for circulating water pipe, sewage treatment systems, or process water tanks. It can be applied by brush, roller or with conventional spray equipment.



Distribution Chambers

Distribution chambers are critical flow-control structures used in wastewater treatment systems to divide and direct water, sludge, and effluent between treatment stages such as aeration basins, clarifiers, digesters, filtration units, and discharge channels. These chambers enable balanced hydraulic flow, consistent system performance, and controlled process loading.

Solution

Duromar® EXP

DUROMAR EXP is a higher chemical and temperature resistant version of the EAC used in the most aggressive of chemical environments. It's used to resurface heat exchangers, valves, or pump internals.

Duromar® SAR

DUROMAR® SAR is an easy-to-use rebuilding putty with excellent abrasion and chemical resistance, heavily filled with aluminum oxide and suitable for restoring pump casings, slurry tanks, weld seams, and worn metal components.

Duromar® HPL-2510

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Pumps

Distribution chambers are critical flow-control structures used in wastewater treatment systems to divide and direct water, sludge, and effluent between treatment stages such as aeration basins, clarifiers, digesters, filtration units, and discharge channels. These chambers enable balanced hydraulic flow, consistent system performance, and controlled process loading.

Solution

Duromar® EAC-LV

DUROMAR EAC-LV is a brushable version of EAC used to provide a smooth final surface while enhancing fluid for resisting cavitation. EAC -LV should be used anywhere a smooth, abrasion, and impact resistant coating system is required.

Duromar® SAR

DUROMAR® SAR is an easy-to-use rebuilding putty with excellent abrasion and chemical resistance, heavily filled with aluminum oxide and suitable for restoring pump casings, slurry tanks, weld seams, and worn metal components.

Duromar® HPL-2221

DUROMAR® HPL-2221 is a medium-viscosity coating offering excellent abrasion, impact, and chemical resistance with flexibility, suitable for rail cars, slurry tanks, and secondary containment, and applied by hand or plural-component spray.



Secondary Containment

Secondary containment structures are critical safety barriers designed to capture spills, leaks, or overflow from primary storage systems such as chemical tanks, sludge tanks, fuel tanks, and dosing systems. These containment areas prevent hazardous materials from reaching the soil, groundwater, or surrounding environment and play an essential role in plant safety, regulatory compliance, and environmental protection.

Solution

Duromar® DF-1301

DUROMAR® DF-1301 is a clear, 100% solids concrete sealer with a long working time. It is used primarily to seal the concrete prior to the application of additional topcoats and to restore the mechanical properties of old concrete. It can be cured at temperatures as low as 40° F and can be applied to damp concrete.

Duromar® DUOFIL

DUROMAR® DUOFIL is a specially formulated 100% solids epoxy grout and rebuilding product for filling holes and rebuilding severely chemically attacked concrete floors and secondary containment areas. DUOFIL provides an excellent base for other DUROFLOR® products, such as CHEMCRETE, DF-4301, etc., where more acid resistance or a smoother finish is required.

Duromar® DF-4301

DUROMAR® DF-4301 is a 100% solids, novolac floor coating with outstanding chemical resistance to acids, bases and solvents. It can be applied by brush, roller, or plural component spray equipment. It is best used in secondary containment areas and floors subject to chemical splashes and spills.



Sedimentation Tanks

Sedimentation (or settling) tanks are essential components used to remove suspended solids from wastewater through gravity settling. They receive influent from primary or secondary treatment stages and allow heavier particles, grit, sand, and organic solids to settle at the bottom, forming sludge that is later removed for further processing.

Solution

Duromar® EAC-FE

DUROMAR® EAC-FE is a brushable more resilient version of EAC used to enhance fluid flow, resist cavitation, or anywhere requiring more impact resistance in a thin film product.

Duromar® SAR

DUROMAR® SAR is a versatile easy-to-use rebuilding putty with excellent abrasion and chemical resistance. This product is heavily filled with aluminum oxide and can be built up to an inch in thickness or more. Typical applications are for rebuilding of pump casings, slurry tanks, weld seams or anywhere requiring the restoration of metal components.

Duromar® HPL-2221

DUROMAR® HPL-2221 is a medium viscosity product with outstanding abrasion resistance, impact resistance, and flexibility. It can be used for rail cars, ash hoppers, slurry tanks, secondary containment, traveling water screens, or anywhere requiring flexibility, abrasion and chemical resistance. It is designed to be applied by hand or with plural component spray equipment.



Sewer Lines/Pipes/Tunnels

Sewer pipelines, tunnels, and conveyance systems transport raw sewage, industrial effluent, stormwater, and sludge throughout municipal and industrial wastewater networks. These structures operate continuously and carry a wide range of corrosive, abrasive, and biologically active materials.

Solution

Duromar® EAC

DUROMAR® EAC is a brushable and versatile maintenance material, which has excellent resistance to both acids and caustics as well as having excellent abrasion resistance. It is primarily used to resurface any component requiring both abrasion and chemical resistance such as tanks, heat exchangers, valve or pump internals.

Duromar® SAR

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Duromar® HPL-2510

DUROMAR® HPL-2510 is an outstanding, versatile and easy to use 100% solids material. It can be used for circulating water pipe, sewage treatment systems, or process water tanks. It can be applied by brush, roller or with conventional spray equipment.



Sumps

Sumps are low-point collection pits used to gather wastewater, sludge, chemicals, and wash-down liquids before pumping them to the next treatment stage. They are commonly located in pump houses, trenches, clarifier areas, chemical dosing rooms, and secondary containment zones. Sumps operate continuously and often handle highly concentrated, stagnant, or intermittently agitated fluids.

Solution

Duromar® EXP

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Duromar® EXP-Thixset

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Trenches

Trenches are channels designed to collect and transport wastewater, sludge, chemical spills, or wash-down water within treatment plants. They are commonly found in clarifier areas, chemical dosing zones, secondary containment spaces, pump rooms, aeration basins, and equipment foundations. Most trenches are constructed from reinforced concrete and operate under continuous wet and abrasive flow conditions.

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DUROMAR® PRODUCTS KEY FEATURES



Chemical & Corrosion Resistance



Abrasion / Wear / Erosion Resistance



100%-Solids, Zero-VOC Formulations



Versatile Application & Broad Product Range



Durability under Harsh Conditions



Repair & Rebuild Capability



Flexibility and Adaptability to Different Substrates



Superior Adhesion Strength



Arudra

Coatings

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