

PRODUCT

PIONEER DURASTEEL

Steel Filled Epoxy

SUPPLIER

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PRODUCT DESCRIPTION

PIONEER DURASTEEL is a soft paste, 100 % solids, steel filled epoxy especially formulated to have the following characteristics :

1. It is a versatile maintenance repair product. Very convenient in repairing damaged equipment.
2. Cures quickly to form a durable metallic mass tha can be drilled, sanded and machined.
3. Simple mixing ratio, 1 : 1 by volume.

Typical Uses. Repairing pipes, valves, tanks; building up worn equipment; filling and leveling surfaces; making tools, templates and metal forming dies.

TECHNICAL DATA

TABLE 1. PHYSICAL PROPERTIES: UNCURED STATE

Color	
Part A	Black
Part B	Beige
Viscosity	Soft Paste
Solids Content	100 %
Mixing Ratio	1 : 1 by volume
Pot Life	20 minutes
Cure Time (initial)	3 hours
Full Cure	96 hours
Weathering Resistance	Excellent
Heat Resistance	Could withstand up to 110 °C oven heat; non-combustible



ADHESIVES & SEALANTS

SPEC DATA SHEET & Application Instruction

Mechanical Properties:

Compressive Strength	ASTM D695	7,180 psi
Flexural Strength	ASTM D790	1,393psi
Tensile Strength	ASTM D63-91	1,313 psi
% Elongation at break		15.2 %

Chemical Resistance

Resistant to oil, gasoline, water and most chemicals
Not resistant to concentrated acids and solvents.

APPLICATION PARAMETERS

Surface Preparation. Surfaces to be doned must be clean and dust, oil, grease free. On large areas where DURASTEEL is to be applied, sanding or sandblasting is a must followed by a complete and thorough removal of the resulting residue.

Mixing. It is a 1 : 1, Part A: by volume mixing ratio. Mix Part A and Part B in a clean container, blend it well until a uniform color is attained. To avoid wastage, prepare a quantity just enough to be consumed within the potlife period (20 minutes).

Method. DURASTEEL is applied by a putty knife or spatula. Preapred mixture is applied on both sides of glue joints. A slight or contact pressure is necessary for at least 6 hours to hold the bond in its proper position while the adhesive cures. Initial bond strength is attained after an overnight stand and its full strength after 96 hours.

Health and Safety Consideration. If skin contact occurs, wipe immediately with cloth of tissue paper dampened with Kerosene and wash it with soap and water. If contact with eyes occurs, flush thoroughly with water and get medical attention immediately.

PACKAGING

TUBES

Mini (Tipid) Pack	15 gms.
Medium Pack	35 gms.

TIN CANS

Gallon, Quart, Pint Kits

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TYPICAL USES

1. To reset loose stones on cuff links, jewelries, brooches, bracelets and other accessories.
2. Repair broken ivory statuettes, figurines, antiques, etc.
3. Restore/repair precious handcrafted vases, jars, pots and other types of decors.
4. To bond porcelain or metal designs and initials on bricks, nameplates, etc.

TECHNICAL DATA

TABLE 1. PHYSICAL PROPERTIES : UNCURED STATE

Color	
Part A	Clear to slight Yellow
Part B	Amber
Viscosity (Consistency)	soft, flowy
Solids Content	100 %
Potlife *A	2 - 4 hours
Mixing Ratio A:B	1:1 by volume
Cure Time; Initial Strength	6 – 8 hours
Full Cure; Maximum Strength	96 hours
Shelf Life	Very stable; indefinite

*A Potlife is shorter during warm weather and longer on cold weather; or when mixture is in small quantity ; or when mixing is done in a container where heat of reaction can be dissipated.

TABLE 2. PHYSICAL PROPERTIES : CURED STATE

Tensile Strength	
Compressive Strength	4,437 psi
Hardness (Shore D)	90 psi
Shrinkage	nil
Heat Resistance	70°C
Weathering Resistance	excellent
Chemical Resistance	Highly resistant to water, acids, alkalies, fuel oils and other organic solvents and chemicals.

APPLICATION PARAMETERS



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Surface Preparation. Surface contaminants such as dirt, grease, oil or wax must be removed from areas to be joined. Clean surfaces by sanding, sandblasting or brushing for stronger bonds. Surfaces should be clean and ready for application before the adhesive is mixed.

Mixing. Mix equal parts by volume of Part A and Part B. Blend thoroughly until color straks disappear and a uniform color is obtained. To avoid loss of application time and wastage, mixing would be accomplished within 5 minutes and prepare a mixture quantity just enough to be consumed within the potlife period.

Method. Apply mixed compound with a putty knife or spatula on one or both faces of glue joints. Join surfaces with sufficient pressure to ensure complete contact anc allow to cure or harden. Unnecessary handling should be avoided until cure is complete.

Cleaning. Clean all tools or equipment used while adhesive is still in its uncured state. Use acetone, foluene, methyl ketone or kerosene to clean tools and spills.

Health Precautions. If skin contact occurs wash with soap and water and if skin irritation persists, obtain medical attention. If material contacts the eyes, flush thoroughly with water and get medical attention immediate.

PACKAGING

TUBES : 15 grams

TIN CANS Gallon, Quart and Pint Kits



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