



Approved Quality
Management System
AS/NZS ISO 9001:2008
Lloyds Register-Certificate
No. MEL 0927759

Technical Data Sheet
SEASHIELD 311 UNDERWATER
CURING EPOXY FLUID GROUT

Description:	Denso 311 Epoxy is a 2-component, non-shrink, high strength fluid grout designed for under water or wet conditions.
Composition:	Based on a hydrophobic resin system it has the unique ability to displace water to ensure good adhesion. A two component system consisting of an epoxy based resin and activator.
Characteristics:	<ul style="list-style-type: none"> • Two component system with a mixing ratio of 10 : 1, Resin : Activator • Non- shrink for maximum durability and adhesion • Resistant to most dilute acids & alkalis, petroleum products & salt water • 100% solids • Designed for underwater and other wet applications • Grey colour
Uses:	Machine bedding, crusher backing, fixing bolts and anchors into concrete. Levelling and fixing rail chairs and lugs. A high strength, pourable, gap filling compound for underwater repairs such as pile restoration work.
Surface Preparation & Application:	<p>All surfaces must be clean, mechanically sound and free of oil, dirt & dust. Concrete and cement screeds to preferably have a wood float finish, with a minimum compressive strength of 25 MPa. Abrasive blast or acid etch to remove laitance.</p> <p>Thoroughly mix the resin and activator in the proportions given, using a slow speed mechanical mixer. Allow to stand for about 10 minutes to allow aeration to subside. Pot life at 25°C is approximately 40 minutes.</p> <p>Pour the mixed grout into the cavity ensuring the following precautions;</p> <ul style="list-style-type: none"> • Allow trapped air to escape • A gap of more than 20mm must be allowed for horizontal flow at 25°C. • Do not apply below 10°C as the compound will become less fluid. <p>Epoxy resin grouts generate heat as they begin to gel due to an exothermic reaction process, especially when large volumes are poured.</p> <p>Clean equipment immediately after use with a water soluble brush cleaner.</p>
Recommended Temperatures:	<p>Application: + 10 to + 40 °C</p> <p>Service: - 20 to + 80 °C</p> <p>Peak: + 80 °C</p>
Shelf Life:	≥ 24 months
Storage:	+10 to + 40 °C. Store in a cool, dry area away from heat and direct sunlight.
Available Sizes /Product Code:	15 kg kit (8 litres) Product Code: S985311



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Physical Properties:	Test	Test Method	Units	Value
	Density	ASTM D1298	kg/L	1.90
	Flash Point	ASTM D92	°C	> 100
	Cure Times @ 25°C Initial Set Practical Cure Full Cure	ASTM C266	hours hours days	8 24 7
	Average Compressive Strength 7 days	ASTM C 579-01	MPa	100
	Average Compressive Strength 2 days 7 days	ASTM C109	MPa	>50 103
	Bond Strength 7 days	ASTM C882	MPa	> 12 Concrete Fails
Limitations:	Do not alter the recommended mixing ratio. Mixing equipment should be cleaned as soon as possible.			
Precautions:	The product is relatively non-toxic, it is however recommended that normal precautions in dealing with conventional epoxy resin systems be adhered to. Safety goggles and rubber gloves are recommended. Avoid prolonged contact with skin. In case of contact with eyes, immediately flush with water for at least 15 minutes and seek prompt medical attention. Do not take internally. Keep out of reach of children. Follow all precautions found in any available Safety Data Sheets, product labels and technical literature.			