GlobalDur GN133 Underwater Epoxy

TECHNICAL DATA SHEET

Epoxy Primer Underwater Solvent free Anticorrosive for Steel and GRP

PRODUCT DESCRIPTION	♦ GlobalDur GN133UE is a solvent free epoxy paint designed for underwater application accordingly with environmental regulations. ♦ GlobalDur GN133UE can be applied directly over steel, concrete, wood and fiberglass, after surface treatment. ♦ GlobalDur GN133UE can be applied directly over steel and weldings in cases where na water immersion fast operational time is required(24 hours at 23ºC degrees, depending on environmental conditions).
PERFORMANCES	• Compatible with cathodic protection; • Excellent water resistance; • Easy application with conventional tools; • Application on large areas with brush or roller by pump assistance is advised. Can be applied by air spray above water line thinning with GN006TH.
RECOMMENDED USE	Underwater steel and concrete structure´s repairs, dams, repaired steel welding areas, splashzone, pipes underwater or high condensation, water tanks, etc..
APPROVALS	

COMPONENT A	COMPONENT B	COLOURS
GN133UE	H133UE	GN133UEG9003 (white), GN133UEG7000 (grey). For other colours, please contact GlobalNavy's office.

Physical Properties

GLOSS	Glossy.
SOLIDS BY VOLUME	100 % (theoretical).
VOC*	NA
FLASH POINT	> 100ºC (> 212ºF) Setaflash
PHYSICAL PROPERTIES	Density: 1,25 g/cm³

Application

SURFACE PREPARATION	Painting Direct to Substrate: GlobalDur GN133UE is suitable for steel, concrete, GRP surfaces prepared by mechanical tools or blasting, accordingly with the following standards: Grit Blasting: SA1 (ISO 8501-1:1988). Wet Blasting:WAB 6/10 (SSPC Vis 5/NACE Vis 9) Mechanical Treatment: St3 (ISO 8501-1:1988). Coated Surfaces: Before application of GN133UE, clean surface if any fouling or debris has settled on surface with abrasive discs. Surface should be free of oil or grease contamination paint before application to avoid failures. Apply soap or degreaser. For more detail's contact GlobalNavy's

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	office.
APPLICATION METHOD	Brush or roller. A power roller is recommended for quickest application. Non underwater areas, can be applied by air-less spray, specially for one coat applications to avoid holydays and pin holes. Usually it is necessary to thin <5% with GN006THG0000.
APPLICATION CONDITIONS	Water temperature must be > 1°C (18°F).
APPLICATION DATA	GlobalDur GN133 Underwater Epoxy is a two pack product, so both components must be mixed on the right ratio. This mixing shall be donein dry conditions. First, component A should be well mixed during 2 minutes. After that, add component B and stir very well until it get homogeneous. If over agitated, pot life will be reduced. High temperatures will reduce pot life and low temperatures will increase pot life.
MIX RATIO	4 / 1 (by weight) and 3 / 1 (by volume)
HARDENER	H133UE
POT LIFE	40 minutes at 23ºC (73ºF).
THINNER	NA. Above water line 5% of GN006THG0000.
SOLVENT / CLEANER	GN003TH Epoxy thinner
DRY TIME	Surface/Hard dry: Approx. 4 hours at 23°C (73ºF) Recoat: Min: 8 hours at 23°C (73ºF)); Max: 7 days at 23ºC (73ºF). After that surface must be reactivated.
THEORETICAL COVERAGE	3,84 Sq.m/Kg. (18,8 Sq.ft/Lb) Dry/Wet: 200 microns (8 mils).
TYPICAL PAINT SYSTEM	• GlobalDur GN133UE 2 x 200 grams for submerse areas. For other situations, please contact GlobalNavy's office.
STORAGE	2 years (storage on the original tightly closed containers in a dry, cool, well ventilated space, at temperatures between 5°C - 30°C).
PACKING	Two pack product, available in packs (A+B) of 1 Kg, 5Kg, 20 Kg.
FURTHER INFORMATION	Contrasting colours for each coat and stripe coating are recommended. If exact colour matching is required, ensure that GN132EFSL in each area is applied from the same control batch numbers.
HEALTH SAFETY	Please take the necessary measures in order to accomplish the national laws and regulations regarding the environmental, health and safety at work. Please observe the safety information displayed on the container. Please refer to the Safety Data Sheet for detailed information on the health, safety hazards and precautions for the use of this product.

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GlobalDur GN133UE - Additional Information

CURING TIME TABLE

GN101LC				15ºC	20ºC	25ºC	30ºC
Pot Life				160 minutes	120 minutes	35 minutes	50 minutes
Dry to touch (Max.)				6 h	4,5 h	4 h	3 h
Foot traffic				12 h	9 h	8 h	6 h
Recoating period	Min.			10 h	7 h	6 h	4 h
	Max.			7 days	7 days	6 days	5 days

PHYSICAL PROPERTIES

Adhesion - Pull Off (ISO 4624:2023)	Steel (dry/wet) surface: >50 Kg/cm$^{2\ (MPa)}$ (710 psi) Concrete (dry/wet) surface: > 1,5 Kg/cm2 (Mpa) (21 psi) (Cohesion failure on concrete)
Abrasion Strength (ISO 7784-2)	72 mg (1000 cycles / 1000 g / CS10)
Impact Resistance	IR 4
Barcol Resistance(ASTM D2583)	26
Elasticity Modulus (ISO/R 527)	120,000 KgF/cm^2
Salt spray resistance (ASTM B117)	Without defects - 2000 hours
Hardness Shore D (DIN 53505)	~85 (7d/23°C)
Maximum elongation (ISO/R 527)	>3%
Flexural Strength (ISO 178)	650 KgF/cm^2 (9245 psi)
Deformation/Impact test (ASTM D2794)	1.22 Kgf.m (12,0 Joules)
Barcol Resistance(ASTM D2583)	30
Immersion in artificial salt water (ASTM D870)	Without defects - 2000 hours
QUV (Using A340 & B313 bulbs)	2000 hours – Chalking (ASTM D659): rating 4
Deformation/Impact test (ASTM D2794)	30 Kg.cm
Absorption (ASTM D570)	0,20%