

BladeRep® Topcoat 12

Technical Data Sheet:
471-43 / BR12XX

1. Introduction

ALEXIT® BladeRep® Topcoat 12 is designed specifically for coating blades where a superior product with chemical, UV, abrasion and mechanical resistance is required. This two-component polyurethane topcoat meets or exceeds OEM standards and provides applicators with the ideal product for blade repairs.

2. Range of application

ALEXIT® BladeRep® Topcoat 12 is designed as a final topcoat on wind turbine rotor blades. The material is very elastic and has good chemical resistance values. It can be applied by spray, roller or brush on spot repairs, or as a final coating over the entire surface of a blade.

3. Color

ALEXIT® BladeRep® Topcoat 12 is available in standard factory packaged colors matching standards of OEM turbine blade manufacturers. Custom colors may be available upon request.

4. Coverage

	m ² /kg	sq.ft. / kg	m ² /kit	sq.ft./ kit	sq.ft./ gal
Theoretical coverage at 100 µm / 4 mil approx. of mixed material	4	41	4	41	195

Recommended dry film thickness: 100 (±20) µm (4 mil).

5. Substrate pre-treatment

Sand the surface with 120 grit paper prior to applying ALEXIT® BladeRep® Topcoat 12. The surface must be clean, dry and free from dust, grease, oil and other contaminants. Topcoat 12 may be applied over all ALEXIT® BladeRep® products and/or any properly prepared surface.

6. Trade names/part no.

Base material	BR12XX*	ALEXIT® BladeRep® Topcoat 12
Hardener	BR12H0	ALEXIT® BladeRep® Hardener 12
Standard Thinner	BR12T4	ALEXIT® BladeRep® Thinner 12 Medium
Fast Thinner	BR12T7	ALEXIT® BladeRep® Thinner 12 Fast

***XX See Range Sheet for Color Selection**

7. Mixing ratio For mid-size and large units:

Spraying and Brush / Roll:	Mixing by Volume:	3 Parts	ALEXIT® BladeRep® Topcoat 12	BR12XX
		1 Part	ALEXIT® BladeRep® Hardener 12	BR12H0
		Reduction up to 10% as necessary with:		
	(for faster drying)		ALEXIT® BladeRep® Thinner 12 Medium	BR12T4
			ALEXIT® BladeRep® Thinner 12 Fast	BR12T7
		Example: 3:1:0.4		
	Mixing by Weight:	4 Parts	ALEXIT® BladeRep® Topcoat 12	BR12XX
		1 Part	ALEXIT® BladeRep® Hardener 12	BR12H0
		Reduction up to 10% as necessary with:		
	(for faster drying)		ALEXIT® BladeRep® Thinner 12 Medium	BR12T4
			ALEXIT® BladeRep® Thinner 12 Fast	BR12T7
		Example: 4:1:0.5		

For kits:

Prior to mixing, shake vigorously by hand for 1 minute. Puncture both container lids, empty entire hardener into base and mix thoroughly. Depending on environmental conditions use of BR12T4 or BR12T7 is recommended. Add 10% thinner (2 almost full caps of thinner bottle 1kg or use scale) and mix thoroughly all three components

For all package sizes:

Mix thoroughly for proper cure!

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8. Application

- Spray:
 - Gravity or siphon feed gun:
 - Nozzle size: 1.7 - 2.2 mm (0.070 – 0.086 inch)
 - Atomizing pressure: 3.0 bar (42 psi)
 - Airless:
 - Nozzle size: 4/13 - 5/15
 - Material pressure: 125 -150 bar (1812 - 2175 psi)
- Brush / Roller: High quality solvent resistant brushes and rollers, foam or short nap fur type.
- Application conditions: 15-35 °C (60-95 °F) and 20-85 % relative humidity. The minimum application condition should be 3 °C (5.4 °F) above dew point.
If applying the product in conditions which are not listed above, please consult your ALEXIT® BladeRep® representative.

Application process for spraying / rolling: Apply 2 coats of ALEXIT® BladeRep® Topcoat 12 to a wet film thickness (WFT) of 100 – 125 µm (4 - 5 mils) each. Allow a Flash-off time of 45 minutes at 23°C (73°F) between each coat before applying the next coat. The total dry film thickness (DFT) should be approx. 100 (±20) µm (4 mils) for a 2-coat application.

After application of ALEXIT® BladeRep® Topcoat 12, no additional process is required before the blade can be put into operation. Before taking turbine into operation, ALEXIT® BladeRep® Topcoat 12 needs time to cure thoroughly. The curing time depends on environmental conditions.

9. Pot life 120 min at 23 °C (73 °F)

10. Drying time	Temperature conditions	15 °C (60 °F)	23 °C (73 °F)	30 °C (86 °F)
	Recommended ALEXIT® BladeRep® Thinner system	BR12T7		BR12T4
Drying time (able to handle)	5-6 h	3.5 h	4 h	2-3 h

11. Packaging

ALEXIT® BladeRep® Topcoat 12	24 kg, 12 kg, 0,8 kg, 1 kg kit**, 1 US Gallon
ALEXIT® BladeRep® Hardener 12	6 kg, 3 kg, 1 US Gallon
ALEXIT® BladeRep® Thinner 12	10 kg, 1 kg (Medium and Fast)

****Kit contains 0.8 kg base material and 0.2 kg hardener and is premeasured for the proper mix ratio**

12. Storage Store in original, unopened containers at a temperature of 5 – 35 °C (41 – 95 °F) (in acc. with DIN EN 3840:2007).



Approved by DNV in combination with ALEXIT® BladeRep® LEP 10 and Profile Filler 5 (TA-DNVGL-CP-0424-07729-0)

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