

# SILICONE COATING OVER METAL ROOFING

REFER TO THE **DURO-SHIELD® SILICONE ROOF COATING INSTALLATION GUIDE** FOR FULL APPLICATION INSTRUCTIONS

### SUBSTRATE PREPARATION AND REPAIRS

INSPECT EACH SUBSTRATE AND PREPARE OR REPAIR ANY OF THE FOLLOWING ISSUES AS DESCRIBED.

Issue	Description	Required Repair
<b>Rust</b>	Severely damaged or rusted seams	REPLACE
	Panels that have holes	REPLACE
	Structurally sound panels with moderate to extensive oxidation	1. <b>Clean</b> and/or lightly abrade to remove loose surface rust 2. <b>Prime</b> with an approved primer
	<b>The entire roof surface must have no more than 20% rust.</b>	
<b>Fasteners</b>	Loose, deteriorated, rusted, or missing fasteners	Retighten, secure, or replace, as necessary
	Stripped fasteners	Replace with larger grommet-head fasteners
	Exposed fasteners must be encapsulated (refer to <u>Seam Treatment Procedures</u> ).	
<b>Gaps</b> (Ex: Between roof cap and metal sheet)	Smaller than 1/8 inch (3 mm)	Seal with a Single-Course Treatment
	Greater than 1/8 inch (3 mm)	1. <b>Install</b> backer rod 2. <b>Seal</b> with a Three-Course Treatment
<b>Side Laps</b>	Treat with a <b>Single-Course</b> Treatment (refer to <u>Seam Treatment Procedures</u> ).	
<b>End Laps</b>	Treat with a <b>Three-Course</b> Treatment (refer to <u>Seam Treatment Procedures</u> ).	
<b>Recommended Primer</b> (Repair areas only)	<ul style="list-style-type: none"> <li>• Duro-Shield Multi-Purpose Primer (LVOC)</li> <li>• Duro-Shield Universal 2-Part Epoxy Primer</li> </ul>	

### AFTER REPAIRS

- Clean** the surface as directed in the Duro-Shield Silicone Roof Coating Installation Guide, after repairs are completed. Allow surface to **DRY COMPLETELY**.
- Adhesion testing** is REQUIRED on all materials after repairs are completed. Results must ensure **70% or greater cohesion** at 2 lbf (8.9 N).  
**If testing fails:**
- Prime** the entire surface with Duro-Shield Multi-Purpose Primer (LVOC) or Universal 2-Part Epoxy.

### APPROVED PRIMERS

DURO-SHIELD MULTI-PURPOSE PRIMER (LVOC)	UNIVERSAL 2-PART EPOXY PRIMER
<ol style="list-style-type: none"> <li><b>Stir</b>, using a low speed drill with mixer attachment, until even consistency is achieved.</li> <li><b>Apply</b> at the following coverage rate: 200 – 250 ft<sup>2</sup>/gal (4.9 – 6.1 m<sup>2</sup>/L) WFT: 6 – 8 mils (0.15 – 0.20 mm) DFT: 3 – 4 mils (0.08 – 0.1 mm)</li> <li><b>Allow to dry</b> for at least 2 hours, until a slightly tacky film state is achieved.</li> </ol>	<ol style="list-style-type: none"> <li>Application instructions: <ul style="list-style-type: none"> <li><b>Mix</b> Part A and Part B, separately, for 3 – 5 minutes.</li> <li><b>Pour</b> Part B into a clean, empty pail.</li> <li><b>Add</b> Part A to Part B. Part A will sink.</li> <li><b>Stir</b>, using a slow speed drill with mixer attachment, until even consistency is achieved.</li> </ul> </li> <li><b>Apply</b> at the following coverage rates: 300 ft<sup>2</sup>/gal (7.4 m<sup>2</sup>/L) WFT: 4 – 6 mils (0.1 – 0.15 mm) DFT: 2 – 3 mils (0.05 – 0.08 mm)</li> <li><b>Allow to dry</b> for at least 6 hours.</li> </ol>

### SEAM TREATMENT PROCEDURES

#### SINGLE-COURSE

<b>PROPERTIES</b>	Single-Course products contain a fiber additive for increased strength and durability	
<b>APPROVED PRODUCTS</b>	• Duro-Shield Silicone Reinforced Sealant – Solvent-free	• Duro-Shield Reinforced Roof Repair (R3) – Solvent-based
<b>METHOD</b>	Seal with one coat of approved product: 4 in. (102 mm) wide, 64 wet mils (75 LF/Gal (6.04 m/L))	

#### THREE-COURSE

<b>PROPERTIES</b>	Three-Course reinforcement provides the best option for strength and durability	
<b>APPROVED PRODUCTS</b>	• Duro-Shield Brush-Grade Sealant – Solvent-free	• Duro-Shield Silicone Roof Coating – Solvent-free
<b>METHOD</b>	<ol style="list-style-type: none"> <li><b>Seal</b> with a base coat of approved product: 6 in. (152 mm) wide, 24 wet mils (50 – 65 LF/Gal (4.03 – 5.23 m/L))</li> <li><b>Immediately embed</b> a layer of Polyester Reinforcement Fabric centered within the base coat: 4 in. (102 mm) wide</li> <li><b>Encapsulate fabric</b> with a top coat of approved product: 6 in. (152 mm) wide, 24 wet mils (50 – 65 LF/Gal (4.03 – 5.23 m/L))</li> </ol>	

#### SCREW HEADS

<b>PROPERTIES</b>	Completely encapsulates screw heads to eliminate voids and air pockets		
<b>APPROVED PRODUCTS</b>	• Duro-Shield Brush-Grade Sealant – Solvent-free	• Duro-Shield Silicone Reinforced Sealant – Solvent-free	• Duro-Shield R3 – Solvent-based
<b>METHOD</b>	Seal each individual fastener with a “Hershey Kiss”-sized application of approved product Approximate application rate: 150 – 175 screw heads per gallon		

<b>SILICONE ROOF COATING PROCEDURE</b>	
<b>PREPARATION</b>	
Do <u>not</u> apply to areas below grade or with ponding water.	
Do <u>not</u> apply if rain is expected within 1 hour or if any surface moisture is present.	
Do <u>not</u> thin this product.	
<b>INSTALLATION</b>	
Apply using one of the following methods:	
○ Pressure pot or airless sprayer (Recommended)	○ Nylon brush
	○ Roller: Short nap roller
1. <b>Stir</b> until an even consistency is achieved. A slow-speed drill with mixer attachment is recommended.	
2. <b>Coat</b> all surfaces including expansion joint covers and flashings.	
<ul style="list-style-type: none"> <li>• Required mil thickness per application determined by the length of the desired warranty.</li> <li>• Refer to Coating Requirement by Warranty Term table.</li> </ul>	
3. <b>Allow to cure</b> 24 – 48 hours, depending on temperature and humidity, before suitable for light foot traffic.	
<b>CLEANUP</b>	
Uncured product may be removed with virgin mineral spirits.	
<b>DO NOT USE WATER OR RECLAIMED SOLVENTS.</b>	

**GENERAL WARRANTY INFORMATION**

<b>AVAILABLE WARRANTIES</b>	
MATERIAL ONLY	MATERIAL AND LABOR
5-Year	--
10-Year	10-Year
15-Year	15-Year
20-Year	20-Year

Refer to the [Duro-Shield Silicone Coating Calculator](#) on the [Duro-Last Portal](#) for assistance in calculating quantities and pricing.

<b>SEAM TREATMENT</b>		
<b>ALL EXPOSED FASTENERS COMPLETELY ENCAPSULATED</b>		
Term	Side Laps	End Laps
5-Year	As Needed	As Needed
10-Year	1-Course	3-Course
15-Year	1-Course	3-Course
20-Year	1-Course	3-Course

**MATERIAL AND LABOR WARRANTY PROCEDURE**

1. A “Pre-Sales Consultation” form must be completed at the jobsite by the contractor and a DL Sales Representative.
2. Approved projects will receive:
  - Unique Project Identifier number
  - Project specifications
  - Steps for completing a successful warranty project
3. In-progress photos and documentation showing repairs, washing, priming, and detail work (where required), will need to be submitted when completing an “Inspection Request” form.
  - Inspection is not required for a material-only warranty.
4. Once approved, the Quality Assurance (“QA”) team will schedule a Duro-Last Technical Representative and the contractor to repair, if necessary, and inspect the completed project.
5. Upon successful inspection, the QA team will issue a warranty to the contractor and the building owner.
6. Contact the Coatings Team at [DuroLast-CoatingsWarranty@holcim.com](mailto:DuroLast-CoatingsWarranty@holcim.com) for additional Material & Labor warranty specifications.
  - Substrate preparation may be required prior to coating. Refer to **SUBSTRATE PREPARATION AND REPAIRS** for additional information.
  - **Primer is required for rust.** Refer to **APPROVED PRIMERS** for further information. Substrate primer requirements based on adhesion testing.

<b>COATING REQUIREMENT BY WARRANTY TERM</b>			
TERM	APPLICATION RATE	WET FILM THICKNESS (WFT)	DRY FILM THICKNESS (DFT)
5-Year Silicone <b>Material Only</b>	1 Coat 1 Gal/100 ft² (0.4 L/m²)	16 MILS (0.41 mm)	15 MILS (0.38 mm)
10-Year Silicone	1 Coat 1.5 Gal/100 ft² (0.6 L/m²)	24 MILS (0.61 mm)	23 MILS (0.58 mm)
15-Year Silicone	1 Coat 2 Gal/100 ft² (0.8 L/m²)	32 MILS (0.81 mm)	31 MILS (0.79 mm)
20-Year Silicone	<b>2 COATS</b> 1.25 Gal/100 ft² (0.5 L/m²) PER COAT	<b>2 COATS</b> 40 MILS TOTAL (1.02 mm)	<b>2 COATS</b> 39 MILS TOTAL (0.99 mm)

**DISCLAIMER**

This document is meant as a quick reference and is not a substitute for the Duro-Shield Silicone Roof Coating Installation Guide, which provides necessary details for project completion. Refer to the full installation guide, safety data sheets, and/or product data sheets for additional details.

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