

Technical Data Guide

CSI Section No. 07 92 13

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Product Description

DuraSil is a neutral cure (RTV) silicone, adhesive sealant, designed for application on dissimilar materials such as glass, aluminum, steel, copper, masonry and many engineering plastics such as polycarbonate, vinyl (PVC), fiberglass (FRP), and acrylic. **DuraSil** is also well suited for difficult to bond surfaces such as Kynar 500[®] PVDF and Tedlar[®] PVF.

DuraSil's low odor, non corrosive, and neutral cure chemistry will not damage unprotected metals. **DuraSil** is highly elastic and low modulus with mechanical properties capable of low temperature flexibility and 50% joint movement. **DuraSil** is recommended for metal architecture, windows and doors, curtain wall construction, and glass block.

DuraSil develops properties rapidly and is effective in many industrial applications where strength, elasticity, adhesion, and speed of set are required.

Applicable Performance Standards

- ASTM C920, Type S, Grade NS, Class 50, Uses NT, T₂, M, G, A & O
- Federal Specification TT-S-00230-C Type II, Class A
- Corps of Engineers CRD-C-541, Type II, Class A
- Canadian Standards Board CAN 19, 13-M82
- SWR Institute Validated (Sealant Waterproofing and Restoration)
- AAMA 802.3-08 Type II, AAMA 803.3-08 Type I, and AAMA 805.2-08 Group C

Regulatory Compliance

- Conforms to OTC Rule for Sealants
- Meets requirements of California Regs: CARB, BAAQMD and SCAQMD
- Conforms to California Proposition 65
- Conforms to USDA Requirements for Non-food Contact

Green Standards:

- LEED 2.2 for New Construction and Major Renovations: Low Emitting Materials (Section 4.1) 1 Point
- NAHB Model Green Home Building Guidelines: 5 Global Impact Points
- VOC Content: less than 33 grams / liter ASTM D2369 EPA Method 24 (tested at 240°F / 115°C)



Advantages

- Neutral Cure. Will not promote corrosion of metal
- Bonds to Kynar 500[®] PVDF coated metal
- Solvent free, 100% solids will not shrink
- Non-slump, applies vertically and overhead
- 10 minute skin over
- Color stability, will not suntan
- +/- 50% joint movement

Colors

Gray	White	Black
Translucent		

* Color matching is available in batch quantity only

Packaging

- 10.1 oz (300 ml)
24 cartridges/carton, 45 cartons/pallet
- 2 and 5 gallon pails or 50 gallon drums
available by special order



Joint Preparation

Joint surfaces should be clean, dry and free from all contamination including: dirt, oils, grease, tar, wax, rust and any other substance that may inhibit the sealant's performance.

Joint Design

Install all joint applications per ASTM and SWRI recommendations and guidelines. Joints shall be designed with a depth to width ratio of 1:2 (joint depth one-half the width). Control the depth of the sealant by using a polyethylene backer rod that is 25% larger than the joint opening at standard temperature. To prevent three-point adhesion use a backer rod or bond breaker tape to ensure proper joint movement and a long lasting weatherproof seal. Where the joint configuration will not permit a backer rod, CHEM LINK recommends that an alternative bond breaker be used.

Joint Width Inches (mm)	Joint Depth Inches (mm)
1/4 - 1/2 (6-13)	1/4 (6)
1/2 - 3/4 (13-19)	1/4 - 3/8 (6-10)
3/4 - 1 (19-25)	3/8 - 1/2 (10-13)
1 - 2 (25-50)	1/2 (13)

Compatible Substrates*	Basic Uses
Kynar 500® PVDF Coated Metal	Window and door frames
Galvanized Metal	Engineered Plastics (PVC)
Aluminum	Curtain Walls
Copper	Expansion joints
Glass	Siding
Fiberglass (FRP)	Parapets
Tedlar® PVF	Cove Joints
Engineered Plastics (PVC)	Transportation
EPS Foam	Weather Sealing

*Test and evaluate to ensure adequate adhesion.

Typical Uncured Properties		
Viscosity	750,000 cP at 73°F (23°C)	Brookfield RVF TF Spindle, 4 RPM, 73°F (23°C)
Gun Grade	Zero Slump	ASTM C697
VOC Content	33 grams/liter	ASTM D2369
Tack Free Time	10 minutes at 50% RH, 72°F (22°C)	ASTM C679

Typical Cured Properties		
Elongation at Break	500 +/- 50%	ASTM D412
Hardness Shore A	10 +/-3	ASTM C661
Shear Strength	75 +/-5 psi	ASTM D1002
Low temp. flex	Pass -10°F (-23°C) 1/4 inch mandrel	ASTM D816
Shrinkage	No visible shrinkage after 14 days	
Service Temperature	-80°F to 400°F (-62°C to 204°C)	

Typical Peel Values ASTM C794	
Aluminum	14 pli cohesive failure
Concrete	10 pli cohesive failure
Glass	19 pli cohesive failure
PVC	17 pli cohesive failure
Vinyl	13 pli cohesive failure
Copper	9.5 pli cohesive failure

Application Guidelines:

Glass

Prior to application remove any residual contamination by mechanical abrasion, sand blasting or power washing. Remove all release agents and old caulk. Dry all visible and standing water prior to applying **DuraSil**.

Metal

Prepare all metal to ensure maximum adhesion. Remove all rust, scale and residue by wire brushing to a bright metal sheen. Remove films, loose or inappropriate coatings and oils with an appropriate solvent such as alcohol.*

**CHEM LINK recommends that coated substrates be tested for adhesion prior to starting a project. Please contact Technical Services for specific application guidelines and recommendations.*

Wood

Wood should be clean, sound and dry prior to sealant application. Allow treated wood to weather for six months prior to application. Remove all coatings and paint (or test for compatibility) to ensure proper bonding. Do not use on fire retardant lumber.

Priming

In most instances **DuraSil** will not require a primer. However, certain applications or substrates may require a primer to ensure a long lasting bond and weatherproof seal. It is the applicator's responsibility to determine the need for a primer. CHEM LINK recommends a primer be used for any application where prolonged immersion is anticipated.

Clean-Up

Wet sealant can be removed using a solvent such as alcohol. Cured **DuraSil** can be removed by abrading or scraping the substrate.

Storage

Store original, unopened containers in a cool, dry area. Protect unopened containers from water, heat and direct sunlight. Elevated temperatures will reduce shelf life. **DuraSil** will not freeze.

Shelf Life

One year from date of manufacture when stored in standard conditions. High temperature and high relative humidity may significantly reduce shelf life. Pails have a shelf life of six months.

Application Instructions

Remove all dirt, oil, loose paint, frost and other contamination from all working surfaces with alcohol DO NOT USE petroleum solvents such as mineral spirits or xylene. Maintain **DuraSil** at room temperature before applying to ensure easy gunning and tooling. Test and evaluate to ensure adequate adhesion. Carefully gun the sealant with a smooth, continuous bead. If tooling is needed, do so within fifteen minutes of application.

Caution

Avoid prolonged contact with skin. Uncured adhesive irritates eyes. In case of contact with eyes immediately flush with water. Call a physician. Please refer to the MSDS for first aid information.

See www.chemlink.com for most current MSDS .
KEEP OUT OF REACH OF CHILDREN.

Limitations

- In areas where prolonged chemical exposure is anticipated, contact Technical Services for recommendations.
- Allow treated wood to "cure" for six months prior to application per APA guidelines.
- Do not use in areas subject to continuous immersion.
- Do not store in elevated temperatures.
- Remove all coatings and sealers before application.
- Do not apply at temperatures below 30°F (-1°C).
- Do not use on surfaces to be painted.
- Do not use on TPO without CHEM LINK TPO primer.
- Do not use on tub and tile applications.
- Staining may occur on limestone and porous substrates, test and evaluate before application.



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**A Complete Product Line of
Adhesives, Sealants and Waterproofing**

- High Performance
- ZERO Solvents
- Odor FREE
- Non Flammable
- Non Toxic
- Non Polluting
- LEED Eligible

Contractor Hot Line
800-826-1681
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Notes:

Read and ensure that the most up-to-date MSDS and technical guidelines are being followed. Proper use and application are the responsibility of the applicator. Direct any questions to Technical Services at 800-826-1681 prior to starting the project.

IMPORTANT NOTICE

Except where prohibited by law, CHEM LINK Products makes no warranties, expressed or implied, statutory or otherwise, including but not limited to, any implied condition or warranty of merchantability or fitness for a particular purpose. User is responsible for determining whether this CHEM LINK Products material is fit for a particular purpose and suitable for user's method of application.

LIMITATIONS OF REMEDIES AND LIABILITY

If this CHEM LINK Products material is proved to be defective, the exclusive remedy at CHEM LINK Products' option shall be to refund the purchase price or replace the defective material. CHEM LINK Products shall not otherwise be liable for loss of damages, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including negligence, warranty or strict liability.



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