



Polyurethane Adhesive Sealant 550FC

Product Data Sheet

Date: January 2013
Supersedes: December 2011

Product Description

550FC is a fast moisture curing one component adhesive/sealant based on polyurethane, which forms a flexible and resistant joint.

Key Features

Features	Advantages
One component/moisture curing	<ul style="list-style-type: none">No MixingSimplifies production
Bonds dissimilar materials	<ul style="list-style-type: none">Gives design flexibility
Adheres to a wide variety of materials	<ul style="list-style-type: none">Multiple uses and design flexibility
Permanently elastic	<ul style="list-style-type: none">Provides long lasting bonds
Fast curing	<ul style="list-style-type: none">Speeds production
Paint-able	<ul style="list-style-type: none">Improves appearance
Low modulus	<ul style="list-style-type: none">Ideal for sealingGood for bonding material with different coefficients of thermal expansion

Performance Characteristics

Skin formation time (min) (ISO 291, 23°C, 50% RH)	Approx. 60 min
Cure time, mm/24hrs (ISO 291, 23°C, 50% RH)	4 mm/24 hrs
Shore A Hardness (ISO 868-3 seconds)	Approx. 45
Density (g/ml) (DIN EN ISO 2811-2)	Black: 1,15 ± 0,05 Others: 1,18 ± 0,05
Elongation at Break (ISO 37)	>600%
Modulus at break (ISO 37)	0,5 MPa
Modulus at break (ISO 37)	1,4 MPa
Sagging (mm) DIN EN ISO 7390	None
Service Temperature	-40°C to + 90°C
Colours	Various
Application temperature	5°C to 35°C
Resistance to dilute acids and bases	Average
Water and salt spray resistance	Excellent
Consistency	Pasty
UV resistance	Good
Compatibility with paints	Water based : yes Solvent based : carry out tests beforehand

UV Properties/ Heat Resistance:

The products have good resistance to UV aging and will retain strength and flexibility over long-term exposure to UV light. The white product may show some yellowing with long-term exposure to UV light.

Long term exposure to temperatures greater than 80°C will decrease tensile strength over time. For this reason these products should not be used in applications where the temperatures will continuously exceed 80°C

Direction for use

Surface Preparation:

Surfaces to be sealed or bonded must be clean, dry and be free from grease, mould release, oil, water/condensation and other contaminants that may affect the adhesion of the sealant. Abrading with 180 to 220 grit abrasive followed by a solvent wipe will improve the bond strength. Suitable solvents include 3M™ Citrus Based Adhesive Remover, 3M™ Scotch-Weld™ Solvent No. 2 or methyl ethyl ketone (MEK).*

*When using solvents, use in a well ventilated area. Extinguish all sources of ignition in the work area and observe product directions for use and precautionary measures. Refer to product label and MSDS for further precautions. Always pre-test solvent to ensure it is compatible with substrates.

Local and federal air quality regulations may regulate or prohibit the use of this product or surface preparation and cleanup materials. Consult local and federal air quality regulations before using these products.

Note: Alcohol will interfere with the curing process and extra care must be taken when using alcohol as a cleaning solvent to prevent any contact with the sealant.

Use of a primer is an extra step and cost and will depend on substrates and the final end use. Using primer can improve the corrosion resistance of certain metals as well as improve the durability of the bond when exposed to high humidity conditions. For most applications high strength bonds on metal can be achieved without the use of a primer. Pre-testing for adhesion is suggested to determine if a primer is needed. The 3M™ Scotch-Weld™ Structural Adhesive Primer EC-1945 B/A works well for most metals.

Application:

Puncture seal in nozzle and knock out the thin seal at cartridge bottom before placing in caulking gun. (For flex packs cut off the small crimp at the end and then place in caulking gun barrel with the open end up). Assemble tip and retaining ring on gun, cut tip to desired size. Product should be used within 24 hours after seal is punctured and should be pressed firmly into the joint to ensure adequate contact of the sealant with the substrate. Apply product when temperatures are between 5°C and 35°C. Do not apply on frozen surfaces or wet surfaces. Do not apply over silicones or in the presence of curing silicones. Avoid contact with alcohol and solvents during curing. Sealant can be tooled immediately after applying to give desired appearance.

Clean up:

While sealant is still soft cleaning can be done with the same solvents used for surface preparation. If sealant is already cured, removal is done mechanically with razor knife, piano wire, sanding or 3M™ Scotch-Brite™ Moulding Adhesive and Stripe Removal Disc. This disc is available from 3M Automotive Aftermarket Division.

Storage

3M™ Polyurethane Adhesive Sealant PU 550 FC must be stored in the original carton at 21°C (70°F) & 50% Relative Humidity for maximum shelf life. Rotate stock on a "first in-first out" basis

Shelf Life

When stored at the recommended conditions in original un-opened containers, 3M™ Scotch-Weld™ Polyurethane Sealant 550 FC has a shelf life of 12 months after date of manufacture.

Precautionary Information

Refer to product label and Material Safety Data Sheet for health and safety information before using the product.

For information please contact your local 3M Office.

www.3M.com

For Additional Information

To request additional product information or to arrange for sales assistance, call 0870 6080050 Address correspondence to: 3M United Kingdom PLC, 3M House, 28 Great Jackson Street, Manchester, M15 4PA

Important Notice

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Values presented have been determined by standard test methods and are average values not to be used for specification purposes. Our recommendations on the use of our products are based on tests believed to be reliable but we would ask that you conduct your own tests to determine their suitability for your applications.

This is because 3M cannot accept any responsibility or liability direct or consequential for loss or damage caused as a result of our recommendations

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