



Tefzel® Thick Film ETFE Coatings

A superior high build and complete powder ETFE system that can achieve film builds of up to 80 - 100 mils dry film thickness (DFT).

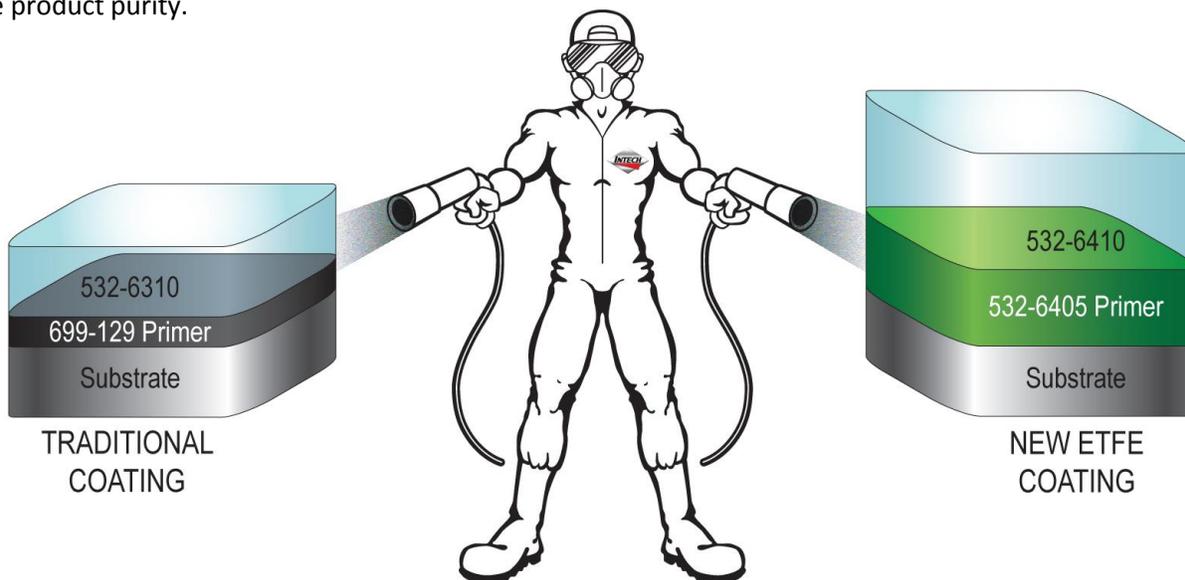
Product Overview

A new addition to the Teflon™ ETFE family of coatings was recently released which expanded the Teflon™ coating offerings to include a clear, super high build coating product, 532-6410. Included with this release was the addition of a green powder primer, 532-6405, used strictly with ETFE mid and topcoats. The combination of these two products creates a complete powder system for the ETFE coating line that can achieve film builds of up to 80 - 100 mils dry film thickness (DFT), which is approximately three times greater than any of our traditional ETFE offerings.

This thick film ETFE coating allows for thicker applications from a per coat and overall dry film thickness perspective. The application technique involves a repeatable spray and bake procedure until desired film thickness is achieved. The resulting finish is an extremely tough, seamless, pinhole free coating that is perfect for harsh chemical environments that do not exceed 302 °F. Additionally, because of the relative chemical inertness of ETFE, this product is ideal for scenarios that require product purity.



Tefzel®



Features & Benefits

- "Thicker Quicker": these coatings apply easily and build quickly; one customer achieved 100 mils
- Powder primer: provides great substrate and inter-coat adhesion
- Variety of applications: Used for single coat or multi-coat applications
- Substrate options: stainless steel, aluminum, except high copper containing alloys
- Continuous operating temperature: 302° F

Performance & Properties

- Excellent **Chemical Resistance** and **Corrosion Resistance**
- Excellent **Abrasion Resistance**
- High **Dielectric Strength**
- Good **Nonstick** or release
- **Low Friction**
- **Superior Adhesion** because the primer doubles coating system bond strength
- **Chemical Inertness** for product purity

Product Codes | Colors

- Liquid Primer | 699N-129 | Black
- Powder Primer | 532-6405 | Green | High-Build
- Topcoat | 532-6410 | Clear





Tefzel® Thick Film ETFE Coatings

Item	Unit	Method	ETFE	ECTFE	PVdF	FEP	PTFE
Mechanical Properties							
Specific Gravity	-	ASTM D792	1.74	1.69	1.77	2.16	2.1
Melt Velocity	Pa·s	-	10 ³	-	10 ³	10 ³	-
Tensile Strength	Mpa	ASTM D638	48	41	55	20	22
Tensile Elongation	%	ASTM D638	430	250	250	280	380
Tensile Modulus	MPa	ASTM D638	800	1650	970	350	400
Flex Modulus	MPa	ASTM D790	900	670	1550	610	520
Izod Impact	J/m	ASTM D256	non-breakable	non-breakable	250	non-breakable	160
Rockwell Hardness	-	ASTM D785	50	93	110	25	18
Durometer D Hardness	-	ASTM D785	67	-	-	55	58
Friction Coefficient	-	-	0.2	-	0.21	0.2	0.09
Thermal Properties							
Melting Point	°C	-	260	245	180	290	327
Linear Thermal Expansion Coefficient	10 ⁻⁵	ASTM D696	9.4	-	12.8	10.5	10.0
Flammability	-	UL-94	V-0	V-0	V-0	V-0	V-0
Continuous Service Temperature	°C	-	150	150	150	200	260
Chemical Properties							
Water Absorption	%	ASTM D570	0.03	0.01	0.05	0.01	0.01
Chemical Resistance	-	ASTM D543	excellent	good	good	excellent	excellent
Gas Permeation	-	ASTM D1434					
O ₂			3.1	-	1.8	12	21
N ₂			1	-	0.1	3.2	7.9
Electrical Properties							
Volume Specific Resistance	(V·cm)/A	ASTM D257	10 ¹⁷	10 ¹⁸	2*10 ¹⁴	10 ¹⁸	10 ¹⁸
Dielectric Constant	-	ASTM D150	2.6	2.6	6.4	2.1	2.1
Dielectric Tangent	-	ASTM D150					
60Hz			0.0006	0.0006	0.05	0.0003	.0001>
1kHz			0.0008	0.0015	0.018	0.0002	.0001>
1MHz			0.005	0.015	0.16	0.0007	.0001>
Break-down Voltage	kV/.01mm	ASTM D149	12	12	9	12	9
Arc Resistance	s	ASTM D495	120	18	60	165	300

Chemistry

Tefzel® ETFE (ethylene tetrafluoroethylene) is a thermoplastic copolymer derived from the polymerization of ethylene and tetrafluoroethylene monomers.

Application Process

Without pre-baking, apply primer and initial topcoat electrostatically. Cure at 580° F for 30 minutes. Hot-flock process may be used for additional film build. See Fact Sheets for application information.

End Uses & Applications

- Chemical tanks
- Reactors
- Valves

Product Information

- **Availability:** Next day shipping by Intech
- **Ordering:** Online, fax, and phone
- **SDS & Fact Sheets:** Always accessible at intechservices.com