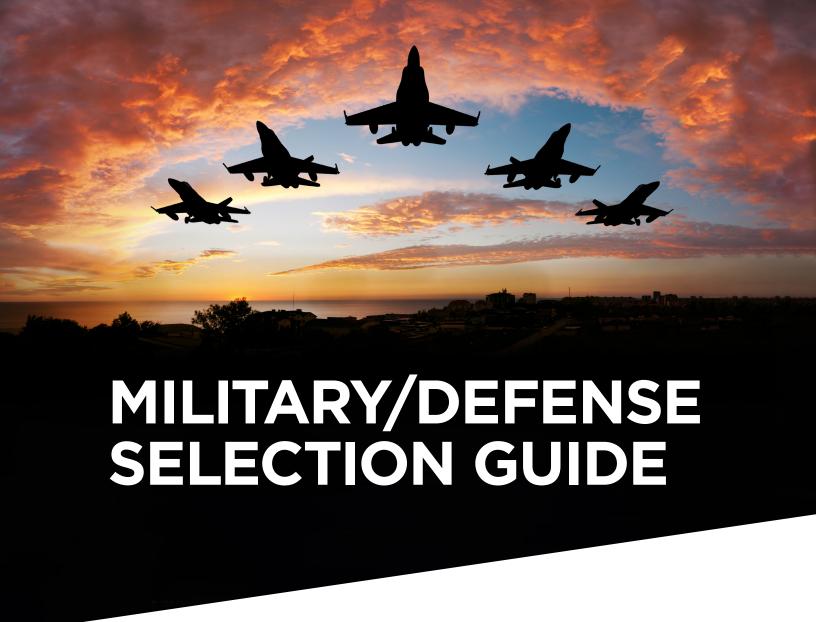
# MILITARY & DEFENSE

# **FORMIDABLE**

Military Aerospace and Land Based Defense Product Selection Guide

SHERWIN-WILLIAMS.



Sherwin-Williams offers the dedication you need from a military solutions provider, supported by a full portfolio of products that feature the protection and durability demanded in this market. From our wide range of products to our technical support and value-added services through the entire finishing process, Sherwin-Williams provides your total finishing solution. When survivability and dependability are critical, you can rely on a partner that has been supplying protective coatings for 150 years.

We offer a **FORMIDABLE** advantage.

# **WASH PRIMERS AND PRETREATMENTS**

PRODUCT	PART #	USE	COLOR
MIL-C-8514 Pretreatment Wash Primer (4:1 with V93V17)	E90G16	Ground and Aero	Green
DOD-P-15328D  Metal Wash Primer, Pretreatment Formula 117 (4:1 with V93VC2)	E90G4	Ground and Aero	Green
TBD  Jet Prep (Zirconium-Based Sogel Pretreatment)	CM0220P01	Ground and Aero	Translucent Blue

### **PRIMERS**

PRODUCT	PART #	USE	COLOR
MIL-DTL-53022, Type IV 2K Corrosion Resistant Epoxy Primer – Ferrous 2.8 VOC (HAPS FREE) (4:1 with V93V235) – fast cure catalyst	E90A228	Ground	Light Gray
MIL-DTL-53022F, Type IV, Class U 2K Corrosion Resistant Epoxy Primer - Ferrous O VOC (VO-HAPS FREE) (4:1 with V93V234)	E90A229	Ground	Light Gray
MIL-DTL-53022F, Type V 2K Corrosion Resistant Epoxy Primer – Ferrous Aerosol, 250 mL and 400 mL	E90A228SP	Ground	Light Gray
MIL-DTL-53030D, Type II 2K Waterborne Corrosion Resistant Epoxy Primer – Ferrous (VO-HAPS FREE) (4:1 with V93V505)	E90W501	Ground	Off White
MIL-DTL-53030D, Type III 2K Waterborne Corrosion Resistant Epoxy Primer – Ferrous Tru-Mix Cartridges (300 mL and 600 mL)	E90W501K	Ground	Off White
MIL-DTL-11414F Fast Dry, Corrosion-Inhibiting VO-HAPs Free Alkyd Primer	E90R351	Ground	Red
MIL-PRF-23377K, Type I, Class C2 Chromated Epoxy Polyamide Primer using standard pigments, 2.8 VOC (3:1 with CM0120933)	CM0724933	Ground and Aero	Yellow
MIL-PRF-23377K, Type I, Class C2 Chromated Epoxy Polyamide Primer using standard pigments, 2.8 VOC (3:1 with V93V230)	E90G203	Ground and Aero	Green
MIL-PRF-23377K, Type II, Class C2 Chromated Epoxy Polyamide Primer using low infrared reflective pigments, 2.8 VOC (3:1 with V93V230)	E90G205	Ground and Aero	Dark Green
MIL-PRF-85582E, Type I, Class C2 Chromated Water Based Epoxy Polyamide Primer using standard pigments, 2.8 VOC	E90Y500*	Ground and Aero	Yellow
MIL-PRF-85582E, Type II, Class C2 Chromated Water Based Epoxy Polyamide Primer using low infrared reflective pigments, 2.8 VOC	E90G500*	Ground and Aero	Dark Green







PRODUCT	PART #	USE	COLOR
MIL-PRF-32550, Type I, Form A, Class S Zinc Rich Epoxy Primer (4:1 with V93V30) Single Component, 92% Zinc Content	E90GC101	Ground	Metallic
MIL-PRF-32550, Type I, Form B, Class S Zinc Rich Epoxy Primer (4:1 with V93V30) Two Component, 90% Zinc Content	E90G17	Ground	Metallic
MIL-PRF-32550, Type III, Form A Zinc Rich Epoxy Primer (4:1 with V93V30) Powder Technology, 62% Zinc Content	EAS6-C0025	Ground	Metallic
TT-P-1757B, Type I, Class C Corrosion Inhibiting Zinc Chromate Primer, Single Component	1757B1C-Y	Ground and Aero	Yellow
TT-P-1757B, Type II, Class C Corrosion Inhibiting Zinc Chromate Primer, Single Component	1757B1C-T	Ground and Aero	34151 Green
TT-P-1757B, Type I, Class N Corrosion Inhibiting Non Chrome Primer, Single Component	1757B1N-Y	Ground and Aero	Yellow
TT-P-1757B, Type I, Class N Corrosion Inhibiting Non Chrome Primer, Single Component	1757B1N-T	Ground and Aero	34151 Green
TT-P-1757B, Type II, Class N Corrosion Inhibiting Non Chrome Primer, Single Component	1757B2N-T	Ground and Aero	34151 Green
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# **TOPCOATS - EPOXY**

PRODUCT	PART #	USE	COLOR
MIL-PRF-22750G, Type II, Class H, Grade A High Solids Epoxy Topcoat (4:1 with V93V228) All colors potentially available	F93A603	Ground and Aero	36375 Flat Gray
MIL-PRF-22750G, Type II, Class H, Grade A High Solids Epoxy Topcoat (4:1 with V93V228) All colors potentially available	F91W226	Ground and Aero	17925 Gloss White
MIL-PRF-22750G, Type II, Class H, Grade A High Solids Epoxy Topcoat (4:1 with V93V228) All colors potentially available	F92G227	Ground and Aero	24533 Seafoam Green
MIL-PRF-22750G, Type II, Class H, Grade A High Solids Epoxy Topcoat (4:1 with V93V228) All colors potentially available	F92H101	Ground and Aero	23446 Tan
MIL-PRF-22750G, Type III, Class H, Grade A High Solids Direct to Metal Epoxy Topcoat (4:1 with V93V234) All colors potentially available	F92H102	Ground	23446 Tan
MIL-PRF-22750G, Type III, Class H, Grade A High Solids Direct to Metal Epoxy Topcoat (4:1 with V93V234) All colors potentially available	F92A27	Ground	26492 Gray
MIL-PRF-22750G, Type III, Class H, Grade A High Solids Direct to Metal Epoxy Topcoat (4:1 with V93V234) All colors potentially available	F93H4	Ground	33446 Tan 686A

PRODUCT	PART #	USE	COLOR
MIL-PRF-22750G, Type II, Class H, Grade A High Solids Epoxy Topcoat (4:1 with V93V228) All colors potentially available	F92G228	Ground	24533 Seafoam Green
MIL-PRF-22750G, Type II, Class H, Grade A High Solids Epoxy Topcoat (4:1 with V93V228) All colors potentially available	F92G28	Ground	24300 Green
MIL-PRF-22750G, Type II, Class H, Grade A High Solids Epoxy Topcoat (4:1 with V93V228) All colors potentially available	F93A604	Ground	36375 Medium Gray
MIL-PRF-22750G, Type II, Class H, Grade A High Solids Epoxy Topcoat (4:1 with V93V228) All colors potentially available	F92A28	Ground	26231 Gray
MIL-PRF-22750G, Type III, Class H, Grade A High Solids Direct to Metal Epoxy Topcoat (4:1 with V93V234) All colors potentially available	F92A604	Ground	36375 Gray

# **TOPCOATS - POLYURETHANE**

PRODUCT	PART#	USE	COLOR
MIL-PRF-85285F, Type I, Class H, Form M, Grade N High Solids Polyurethane Topcoat (2:1) 420 g/l VOC, Aircraft and Aircraft Ground Support Equipment-AGE	F91 Series	Ground and Aero	Gloss Colors
MIL-PRF-85285F, Type I, Class H, Form M, Grade N High Solids Polyurethane Topcoat (2:1) 420 g/l VOC, Aircraft and Aircraft Ground Support Equipment-AGE	F92 Series	Ground and Aero	Semi-Gloss Colors
MIL-PRF-85285F, Type I, Class H, Form M, Grade N High Solids Polyurethane Topcoat (2:1) 420 g/I VOC, Aircraft and Aircraft Ground Support Equipment-AGE	F93 Series	Ground and Aero	Lusterless Colors
MIL-PRF-85285F, Type II, Class H, Form M, Grade N High Solids Polyurethane Topcoat (4:1 with V66V255) 340 g/l VOC Aircraft Ground Support Equipment-AGE	F91 Series	Ground and Aero	Gloss Colors
MIL-PRF-85285F, Type II, Class H, Form M, Grade N High Solids Polyurethane Topcoat (4:1 with V66V255) 340 g/l VOC Aircraft Ground Support Equipment-AGE	F92 Series	Ground and Aero	Semi-Gloss Colors
MIL-PRF-85285F, Type II, Class H, Form M, Grade N High Solids Polyurethane Topcoat (4:1 with V66V255) 340 g/l VOC Aircraft Ground Support Equipment-AGE	F93 Series	Ground and Aero	Lusterless Colors
MIL-PRF-85285F, Type I and IV, Class H, Form M, Grade N High Solids High Performance Polyurethane Topcoat (1:1 with CM0844H01) 420 g/I VOC Aircraft and Aircraft Ground Support Equipment-AGE	F94 Series	Ground and Aero	Gloss Colors
MIL-PRF-85285F, Type I and IV, Class H, Form M, Grade N High Solids High Performance Polyurethane Topcoat (3:1 with CM0893H31) 420 g/I VOC Aircraft and Aircraft Ground Support Equipment-AGE	F92 Series	Ground and Aero	Semi-Gloss Colors
MIL-PRF-85285F, Type I and IV, Class H, Form M, Grade N High Solids High Performance Polyurethane Topcoat (3:1 with CM0893H31) 420 g/I VOC Aircraft and Aircraft Ground Support Equipment-AGE	F93 Series	Ground and Aero	Lusterless Colors

PRODUCT	PART #	USE	COLOR
MIL-DTL-53039E, Type IV  1K Aliphatic Polyurethane 1.0 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93B0S114	Ground and Aero	37030 Black
MIL-DTL-53039E, Type IV  1K Aliphatic Polyurethane 1.0 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93B114	Ground and Aero	37038 Aircraft Black / 37030 Black
MIL-DTL-53039E, Type IV  1K Aliphatic Polyurethane 1.0 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93R101	Ground and Aero	31136 Aircraft Red
MIL-DTL-53039E, Type IV  1K Aliphatic Polyurethane 1.0 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93G0S116	Ground and Aero	34094 Green 383
MIL-DTL-53039E, Type IV  1K Aliphatic Polyurethane 1.0 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93W103	Ground and Aero	37875 Aircraft White
MIL-DTL-53039E, Type IV  1K Aliphatic Polyurethane 1.0 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93N113	Ground and Aero	30051 Brown 383
MIL-DTL-53039E, Type IV  1K Aliphatic Polyurethane 1.0 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93H126	Ground and Aero	33303 Sand



PRODUCT	PART #	USE	COLOR
MIL-DTL-53039E, Type IV 1K Aliphatic Polyurethane 1.0 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93H0S124	Ground and Aero	33446 Tan 686A
MIL-DTL-53039E, Type IV 1K Aliphatic Polyurethane 1.0 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93A34	Ground and Aero	36231 Interior Aircraft Gray
MIL-DTL-53039E, Type IV 1K Aliphatic Polyurethane 1.0 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93G116	Ground and Aero	34094 Green 383
MMIL-DTL-53039E, Type IV 1K Aliphatic Polyurethane 1.0 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93H124	Ground and Aero	33446 Tan 686A
MIL-DTL-53039E, Type IX 1K Aliphatic Polyurethane 3.5 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93B0S112	Ground and Aero	37038 Aircraft Black / 37030 Black
MIL-DTL-53039E, Type IX 1K Aliphatic Polyurethane 3.5 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93H0S118	Ground and Aero	33446 Tan 686A
MIL-DTL-53039E, Type IX 1K Aliphatic Polyurethane 3.5 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93N111	Ground and Aero	30051 Brown 383
MIL-DTL-53039E, Type IX 1K Aliphatic Polyurethane 3.5 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93G114	Ground and Aero	34088 Olive Drab
MIL-DTL-53039E, Type IX 1K Aliphatic Polyurethane 3.5 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93W101	Ground and Aero	37875 Aircraft White
MIL-DTL-53039E, Type IX  1K Aliphatic Polyurethane 3.5 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93B112	Ground and Aero	37030 Black
MIL-DTL-53039E, Type IX  1K Aliphatic Polyurethane 3.5 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93A32	Ground and Aero	36231 Aircraft Gray



PRODUCT	PART#	USE	COLOR
MIL-DTL-53039E, Type IX 1K Aliphatic Polyurethane 3.5 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93H120	Ground and Aero	33303 Sand
MIL-DTL-53039E, Type IX  1K Aliphatic Polyurethane 3.5 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93H125	Ground and Aero	33245 Earth Yellow
MIL-DTL-53039E, Type IX  1K Aliphatic Polyurethane 3.5 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93H118	Ground and Aero	33446 Tan 686A
MIL-DTL-53039E, Type IX 1K Aliphatic Polyurethane 3.5 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93B112	Ground and Aero	37038 Aircraft Black
MIL-DTL-53039E, Type IX 1K Aliphatic Polyurethane 3.5 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93G0S111	Ground and Aero	34094 Green 383
MIL-DTL-53039E, Type IX 1K Aliphatic Polyurethane 3.5 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93G119	Ground and Aero	34031 Aircraft Green
MIL-DTL-53039E, Type IX 1K Aliphatic Polyurethane 3.5 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93H122	Ground and Aero	33510 Dark Sandstone
MIL-DTL-53039E, Type IX 1K Aliphatic Polyurethane 3.5 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93Y103	Ground and Aero	33538 Aircraft Yellow
MIL-DTL-53039E, Type IX  1K Aliphatic Polyurethane 3.5 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93G111	Ground and Aero	34094 Green 383
MIL-DTL-53039E, Type IX  1K Aliphatic Polyurethane 3.5 VOC, VO-HAPS FREE Polymeric Flattened Chemical Agent Resistant Coating	F93G0L111	Ground and Aero	34094 Green 383
MIL-DTL-64159C, Type II Waterborne Polyurethane, Chemical Agent Resistant Coating (2:1 with V93V502)	F93B506	Ground and Aero	37038 Aircraft Black
MIL-DTL-64159C, Type II Waterborne Polyurethane, Chemical Agent Resistant Coating (2:1 with V93V502)	F93G509	Ground and Aero	34160 IRR Foliage Green
MIL-DTL-64159C, Type II Waterborne Polyurethane, Chemical Agent Resistant Coating (2:1 with V93V502)	F93H504	Ground and Aero	33446 Tan 686A
MIL-DTL-64159C, Type II and III Waterborne Polyurethane, Chemical Agent Resistant Coating (2:1 with V93V502)	F93A501	Ground and Aero	36231 Interior Gray
MIL-DTL-64159C, Type II and III Waterborne Polyurethane, Chemical Agent Resistant Coating (2:1 with V93V502)	F93B505	Ground and Aero	37030 Black

PRODUCT	PART #	USE	COLOR
MIL-DTL-53039E, Type IV Waterborne Polyurethane, Chemical Agent Resistant Coating (2:1 with V93V502)	F93G504	Ground and Aero	34094 Green 383
MIL-DTL-53039E, Type IV Waterborne Polyurethane, Chemical Agent Resistant Coating (2:1 with V93V502)	F93G505	Ground and Aero	34031 Aircraft Green
MIL-DTL-53039E, Type IV Waterborne Polyurethane, Chemical Agent Resistant Coating (2:1 with V93V502)	F93G510	Ground and Aero	34201 Woodland Desert Sage
MMIL-DTL-53039E, Type IV Waterborne Polyurethane, Chemical Agent Resistant Coating (2:1 with V93V502)	F93G512	Ground and Aero	34088 Olive Drab
MIL-DTL-53039E, Type IX Waterborne Polyurethane, Chemical Agent Resistant Coating (2:1 with V93V502)	F93N505	Ground and Aero	30051 Brown 383

# **TOPCOATS - ACRYLIC**

PRODUCT	PART #	USE	COLOR
MIL-PRF-81352C, Type I Coatings, Aircraft Touch-Up	81352-37038	Aero	37038 Black
MIL-PRF-81352C, Type I Coatings, Aircraft Touch-Up	81352-36118	Aero	36118 Gray

# **TOPCOATS - ALKYD**

PRODUCT	PART #	USE	COLOR
MIL-DTL-11195H, Type II Enamel, Lusterless, Fast Dry 3.5 VOC, VO-HAPS Free Ammunition Coating	F93AC350	Ground and Aero	36231 Gray
MIL-DTL-11195H, Type II Enamel, Lusterless, Fast Dry 3.5 VOC, VO-HAPS Free Ammunition Coating	F93GC350	Ground and Aero	34558 Green
MIL-DTL-11195H, Type II Enamel, Lusterless, Fast Dry 3.5 VOC, VO-HAPS Free Ammunition Coating	F93GC358	Ground and Aero	34540 Green
MIL-DTL-11195H, Type II Enamel, Lusterless, Fast Dry 3.5 VOC, VO-HAPS Free Ammunition Coating	F93NC350	Ground and Aero	30117 Brown
MIL-DTL-11195H, Type II Enamel, Lusterless, Fast Dry 3.5 VOC, VO-HAPS Free Ammunition Coating	F93YC350	Ground and Aero	33538 Yellow

PRODUCT	PART#	USE	COLOR
MIL-DTL-11195H, Type II Enamel, Lusterless, Fast Dry 3.5 VOC, VO-HAPS Free Ammunition Coating	F93AC351	Ground and Aero	36375 Gray
MIL-DTL-11195H, Type II Enamel, Lusterless, Fast Dry 3.5 VOC, VO-HAPS Free Ammunition Coating	F93GC353	Ground and Aero	34088 Olive Drab
MIL-DTL-11195H, Type II Enamel, Lusterless, Fast Dry 3.5 VOC, VO-HAPS Free Ammunition Coating	F93HC350	Ground and Aero	33446 Tan
MIL-DTL-11195H, Type II Enamel, Lusterless, Fast Dry 3.5 VOC, VO-HAPS Free Ammunition Coating	F93RL350	Ground and Aero	31158 Red
MIL-DTL-11195H, Type II Enamel, Lusterless, Fast Dry 3.5 VOC, VO-HAPS Free Ammunition Coating	F93WL350	Ground and Aero	37925 White
MIL-DTL-11195H, Type II Enamel, Lusterless, Fast Dry 3.5 VOC, VO-HAPS Free Ammunition Coating	F93BL350	Ground and Aero	37038 Black
MIL-DTL-11195H, Type II Enamel, Lusterless, Fast Dry 3.5 VOC, VO-HAPS Free Ammunition Coating	F93GC355	Ground and Aero	34079 Forest Green
MIL-DTL-11195H, Type II Enamel, Lusterless, Fast Dry 3.5 VOC, VO-HAPS Free Ammunition Coating	F93LC350	Ground and Aero	35109 Blue
MIL-DTL-11195H, Type II Enamel, Lusterless, Fast Dry 3.5 VOC, VO-HAPS Free Ammunition Coating	F93WC350	Ground and Aero	37875 White
MIL-DTL-11195H, Type II Enamel, Lusterless, Fast Dry 3.5 VOC, VO-HAPS Free, MAK Free Ammunition Coating	F93HC351	Ground and Aero	33446 Tan
MIL-DTL-11195H, Type II Enamel, Lusterless, Fast Dry 3.5 VOC, VO-HAPS Free, MAK Free Ammunition Coating	F93GC359	Ground and Aero	34079 Forest Green
A-A-59166A, Type II (MIL-W-5044C) Wing Walk Compound, Nonslip	B59166-2-35237	Ground and Aero	35237 Blue*
A-A-59166A, Type II (MIL-W-5044C) Wing Walk Compound, Nonslip	B59166-2-36231	Ground and Aero	36231 Gray*
A-A-59166A, Type II (MIL-W-5044C) Wing Walk Compound, Nonslip	B59166-2-36320	Ground and Aero	36320 Gray*
A-A-59166A, Type II (MIL-W-5044C) Wing Walk Compound, Nonslip	B59166-2-36440	Ground and Aero	36440 Light Gray*
A-A-59166A, Type II (MIL-W-5044C) Wing Walk Compound, Nonslip	B59166-2-37038	Ground and Aero	37038 Black*

# **SOLVENTS**

PRODUCT	PART #	USE	COLOR	
MIL-DTL-81772C, Type I Thinner, Aircraft Coating, Polyurethane Thinner	81772B1	Ground and Aero	Clear	
MIL-DTL-81772C, Type II Thinner, Aircraft Coating, Epoxy Thinner	R91K210	Ground and Aero	Clear	
MIL-DTL-81772C, Type III Thinner, Aircraft Coating, Acrylic and Alkyd Thinner	81772B3	Ground and Aero	Clear	
MIL-DTL-81772C, Type IV Thinner, Aircraft Coating, Polyurethane Thinner	R91K25	Ground and Aero	Clear	
TT-T-266D Thinner, Aircraft Coating, Epoxy Thinner	266D	Ground and Aero	Clear	

# **SPECIALTY**

PRODUCT	PART #	USE	COLOR
TT-P-28H Low VOC Heat Resisting Aluminum	TBD	Ground and Aero	17178 Silver
MIL-PRF-14105E, Type I  1K Silicone, 3.5 lbs/gal VOC Heat Resisting Coating	C71G8	Ground and Aero	34094 Green 383
MIL-PRF-14105E, Type I  1K Silicone, 3.5 lbs/gal VOC Heat Resisting Coating	C71B6	Ground and Aero	37030 Black

#### MILITARY SPECIFIED FINISHES GENERAL PRODUCT INFORMATION

#### **Acronym Key**

VOCs: Volatile Organic Compounds HAPs: Hazardous Air Pollutants

VO-HAPs: Volatile Organic - Hazardous Air Pollutants

**CARC: Chemical Agent Resistant Coatings** 

#### MIL-DTL-53039, Type III, 1.5 VOC, Polymeric

This specification covers single component, chemical agent resistant, aliphatic polyurethane coatings for use as a finish coat on military equipment. The coating is lead- and hexavalent-chromium-free and contains a maximum of 1.5 pounds/gallon (180 grams/liter) VOCs. This product is also VO-HAPs-free. Polymeric flattening agents are used to lower the gloss in this coating.

#### MIL-DTL-53039, Type IV, 1.0 VOC, Polymeric

This specification covers single component, chemical agent resistant, aliphatic polyurethane coatings for use as a finish coat on military equipment. The coating is lead- and hexavalent-chromium-free and contains a maximum of 1.0 pounds/gallon (120 grams/liter) VOCs. This product is also VO-HAPs-free. Polymeric flattening agents are used to lower the gloss in this coating.

#### MIL-DTL-53039, Type VIII

This specification covers single component, chemical agent resistant, aliphatic polyurethane coatings supplied as self-contained portable kits. Application can include aerosol, brush, roller and cartridge methods. The coatings have a maximum VOC of 1.5 pounds/gallon (180 grams/liter), with the exception of aerosols, which shall have a maximum VOC of 3.5 pounds/gallon (420 grams/liter).

#### MIL-DTL-53039, Type IX, 3.5 VOC, Polymeric

This specification covers single component, chemical agent resistant, aliphatic polyurethane coatings for use as a finish coat on military equipment. The coating is lead- and hexavalent-chromium-free and contains a maximum of 3.5 pounds/gallon (420 grams/liter) VOCs. This product is also VO-HAPs-free. Polymeric flattening agents are used to lower the gloss in this coating.

#### MIL-DTL-64159, Type II

This specification covers water-dispersible, chemical agent resistant, aliphatic polyurethane coatings for use as a finish coat on all military tactical equipment, which includes ground, aviation and related support equipment. The coatings are HAPs-free and have a maximum VOC content of 1.8 pounds/gallon (220 grams/liter) as packaged. Polymeric flattening agents are used to lower the gloss in this coating.

#### MIL-DTL-64159, Type III

This specification covers water-dispersible, chemical agent resistant, aliphatic polyurethane coatings packaged in various quantities for small volume or touch-up applications for use as a finish coat on all military tactical equipment, which includes ground, aviation and related support equipment. The coatings are HAPs-free and have a maximum VOC content of 1.8 pounds/gallon (220 grams/liter) as packaged. Polymeric flattening agents are used to lower the gloss in this coating.

#### MIL-DTL-53022, Type II

This specification covers a fast-drying, corrosion-inhibiting epoxy primer for ferrous and nonferrous metal substrates. This primer is high solids, lead- and chromate-free, formulated to meet a maximum VOC content of 3.5 pounds/gallon (420 grams/liter) as packaged.

#### MIL-DTL-53022, Type III, HAPs-free, 2.8 VOC

This specification covers a fast-drying, corrosion-inhibiting epoxy primer for ferrous and nonferrous metal substrates. This primer is high solids, lead- and chromate-free, formulated to meet a maximum VOC content of 2.8 pounds/gallon (340 grams/liter) as packaged.

#### MIL-DTL-53022, Type IV, HAPs-free, 2.8 VOC

This specification covers a fast-drying, corrosion-inhibiting epoxy primer for ferrous and nonferrous metal substrates. This product exhibits superior corrosion protection when compared to standard MIL-DTL-53022D, Type II and Type III primers.



#### MILITARY SPECIFIED FINISHES GENERAL PRODUCT INFORMATION

#### **Acronym Key**

VOCs: Volatile Organic Compounds HAPs: Hazardous Air Pollutants

VO-HAPs: Volatile Organic - Hazardous Air Pollutants

**CARC: Chemical Agent Resistant Coatings** 

#### MIL-DTL-53022, Type V

This specification covers a fast-drying, corrosion-inhibiting epoxy primer for ferrous and nonferrous substrates. Type V contains portable kits. The kits contain the Type IV corrosion inhibiting epoxy primer in a touch-up system.

#### MIL-DTL-53030, Type II

This specification covers a two component, waterborne, corrosion-inhibiting epoxy primer for pretreated ferrous and nonferrous metal substrates. The primer is lead- and chromate-free and is compatible with CARC aliphatic polyurethane topcoats. This primer contains no more than 2.8 pounds/gallon (340 grams/liter) of VOCs. EPP approved.

#### MIL-DTL-53030, Type III - Touch-up Cartridges

This specification covers a two component, waterborne, corrosion-inhibiting epoxy primer packaged in various quantities for small volume or touch-up applications for pretreated ferrous and nonferrous metal substrates. The primer is lead- and chromate-free and is compatible with CARC aliphatic polyurethane topcoats. This primer contains no more than 2.8 pounds/gallon (340 grams/liter) of VOCs. EPP approved.

#### MIL-DTL-11414

This specification covers the requirements of a fast-drying, corrosion-inhibiting, low-VOC-content alkyd primer for metal surfaces. This primer is lead and chromate free and contains no more than 3.5 Pounds/gallon (420 grams/liter) of VOCs as applied.

#### MIL-PRF-22750, Type I: CC-M17 and Type II

This specification covers a two component, high solids epoxy coating with a maximum VOC content of 2.8 pounds/gallon (340 grams/liter). Grade A.

#### MIL-PRF-22750, Type III

This specification covers a two component, high solids epoxy coating with a maximum VOC content of 2.8 pounds/gallon (340 grams/liter) that is intended to be used direct to metal. The coatings exhibit enhanced corrosion performance, including a minimum 1,000 hours salt spray resistance and 40 cycles on cyclic corrosion testing. This type is only available in semi-gloss and lusterless colors.



#### MIL-PRF-85285, Type I and IV, Class H

This product is a high-performance, two component polyester urethane, designed for exterior use on high-performance general aviation and commercial aircraft.

#### MIL-PRF-85285, Type II, Class H

This specification covers a polyurethane coating for ground support equipment that contains no more than 2.9 pounds/gallon (340 grams/liter) VOCs.

#### MIL-PRF-85285, Type IV, Class H

This product is a high-performance, two component urethane, designed for interior/exterior use on high-performance military, commercial and general aviation aircraft as well as ground support equipment where exceptional weathering and durability is needed.

#### MIL-PRF-32348, Type III

This specification covers powder coatings for use as CARC topcoat. These coatings have zero VOCs and are free of VO-HAPs and HAPs, other than potentially cobalt and hexavalent chrome.

#### DOD-P-15328

This specification covers pretreatment wash primer for use on clean metal surfaces of all types as a treatment prior to application of a coating system. The purpose of the material is to increase adhesion of a coating system, and should not be used as a permanent protective coating by itself.

#### MILITARY SPECIFIED FINISHES GENERAL PRODUCT INFORMATION

#### **Acronym Key**

VOCs: Volatile Organic Compounds HAPs: Hazardous Air Pollutants

VO-HAPs: Volatile Organic - Hazardous Air Pollutants

**CARC: Chemical Agent Resistant Coatings** 

#### MIL-C-8514

This specification covers pretreatment wash primer for use on clean metal surfaces of all types as a treatment prior to application of a coating system. The purpose of the material is to increase adhesion of a coating system, and should not be used as a permanent protective coating by itself.

#### MIL-PRF-23377, Type I, Class C2

This specification covers corrosion-inhibiting, chemical- and solvent-resistant, solvent-borne, high solids epoxy primers that have a maximum VOC content of 2.8 pounds/gallon (340 grams/liter). Type I primers use standard pigments. Class C2 refers to the use of strontium-chromate-based corrosion inhibitors.

#### MIL-PRF-23377, Type II, Class C2

This specification covers corrosion inhibiting, corrosion-inhibiting, chemical- and solvent-resistant, solvent-borne, high solids epoxy primers that have a maximum VOC content of 2.8 pounds/gallon (340 grams/liter). Type II primers use low infrared reflective pigments. Class C2 refers to the use of strontium-chromate-based corrosion inhibitors.

#### MIL-PRF-85582, Type I and II, Class C2

This specification covers corrosion inhibiting, chemical and solvent resistant, waterborne/reducible, high solids epoxy primers that have a maximum VOC content of 2.8 pounds/gallon (340 grams/liter). Type I primers use standard pigments. Type II uses low infrared pigments. Class C2 refers to the use of strontium-chromate-based corrosion inhibitors.

#### TT-P-1757, Type I, Class C

This specification covers one-component primer coatings that are alkyd-based, corrosion-inhibiting and contain chromate. The volatile content of Type I coatings consists of non-photochemically reactive solvents.

#### TT-P-1757, Type I and II, Class N

This specification covers one-component primer coatings that are alkyd-based, corrosion-inhibiting and non-chrome. The volatile content of Type I coatings consists of non-photochemically reactive solvents, and the Type II have a VOC less than or equal to 340 grams/liter (2.8 lb./gal).

#### MIL-T-81772, Type I, Type II, Type III and Type IV

This specification covers four types of thinners to be used in aircraft coatings. Type I is for use in polyurethane coatings, Type II in epoxies, Type III is used with acrylics and alkyds, Type IV is used with polyurethane and epoxies where low-VOC and HAP-free are required.

#### TT-T-266D

This specification covers a thinner for cellulose-nitrate based dopes and lacquers of the spraying type.

#### MIL-PRF-81352C, Type I

This specification covers general touch-up coatings for use on aircraft and support equipment. Type I covers acrylicbased coatings.

#### A-A-59166

This specification covers nonslip compound used for walkways on exterior surfaces. Type I is smooth texture (without grit) and Type II is rough texture (with grit).

#### MIL-DTL-11195, Type II

This specification covers a fast-drying, lusterless, low-VOC-content alkyd enamel for use on interior and exterior metal surfaces. These enamels are formulated free of lead and hexavalent chromium, with a maximum VOC content of 3.5 pounds/gallon (420 grams/liter) as packaged. Type II contains corrosion inhibiting pigments and is formulated free of hazardous air pollutants (HAPs-free).

#### MIL-PRF-14105, Type I

This specification covers heat-resistant, ambient dry/heat cure paint able to withstand temperatures to a maximum of 1400°F (760°C). The paint is intended to be used on steel surfaces exposed to high temperatures and exterior weathering. The coating is HAPs-free.

# **FORMIDABLE**

MILITARY/DEFENSE SELECTION GUIDE

At Sherwin-Williams, we think about coatings differently, continuously seeking the perfect solution to help your products win over your customers. Whether you need the most rugged and protective coating, a technical expert to provide answers and hands-on support, consistently perfect color at just the right gloss, or a custom solution created just for you – we are here to help. We are Sherwin-Williams General Industrial Finishes, and we are obsessed with giving you the competitive edge.