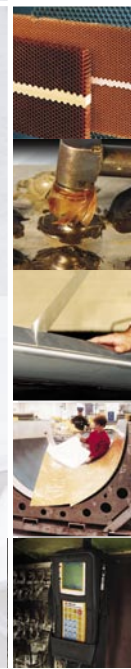


3M Products and Solutions for the Aerospace Industry



3M *Aerospace*

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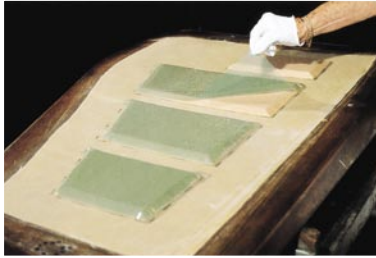


Adhesive Solutions

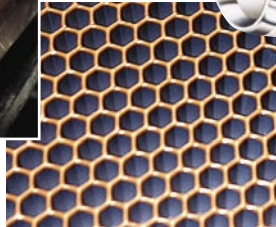


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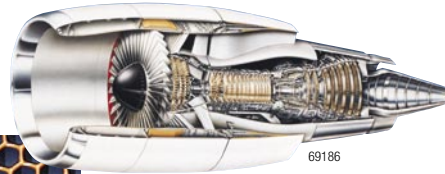
Adhesive Films — 350°F Cure



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69186

3M™ Scotch-Weld™ Structural Adhesive Film AF 191

- Epoxy designed for bonding composites, metal-to-metal and metal-to-honeycomb components.
- High shear strength.
- Excellent elevated temperature performance.
- Extremely high peel strength.
- Excellent long-term durability.
- Flexible cure cycles; from 275°F (135°C) up to 400°F (204°C).

PRODUCT	SIZE	WT.	FILM COLOR	UPC
AF 191	36 in x 50 yds	.10	Tan	021200 88080 3
AF 191 G108	36 in x 50 yds	.10	Tan	021200 23302 9
	36 in x 25 yds	.08	Tan	021200 23394 4
AF 191K	36 in x 50 yds	.08	Tan	021200 88092 6
	36 in x 50 yds	.08	Tan	021200 88079 7
	48 in x 36 yds	.08	Tan	021200 76119 5
AF 191M	36 in x 50 yds	.03	Tan	021200 41394 0
	36 in x 50 yds	.06	Tan	021200 23340 1
	48 in x 18 yds	.015	Tan	021200 49001 9
AF 191U	48 in x 36 yds	.015	Tan	021200 82427 2
	36 in x 50 yds	.035	Tan	021200 88082 7
	18 in x 50 yds	.055	Tan	021200 49918 0
	36 in x 50 yds	.055	Tan	021200 88083 4

3M™ Scotch-Weld™ Structural Adhesive Film AF 555

- Structural adhesive film with long-term durability on honeycomb and metal-to-metal components.
- Excellent pre-bond humidity performance on composite substrates.
- Minimum of 90 days out-time at ambient conditions.
- Unsupported version available for reticulation.
- Film adhesive can be cured from 300°F (150°C) up to 355°F (180°C).

PRODUCT	SIZE	WT.	FILM COLOR	UPC
AF 555U	36 in x 50 yds	.03	Orange	048011 53227 1
		.035	Orange	048011 53168 7
		.05	Orange	048011 53224 0
		.08	Orange	048011 53269 1
AF 555K	36 in x 50 yds	.05	Orange	048011 53270 7
		.08	Orange	048011 53160 1
		.10	Orange	048011 53164 9
AF 555M	36 in x 50 yds	.015	Orange	048011 53268 4
		.03	Orange	048011 53223 3
		.035	Orange	048011 53166 3
		.05	Orange	048011 53220 2
		.06	Orange	048011 53157 1
		.08	Orange	048011 53162 5

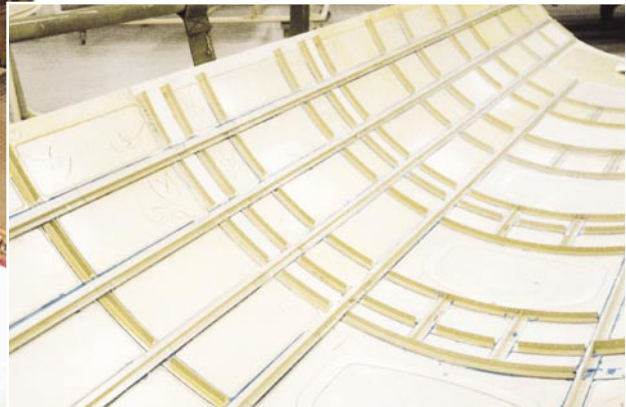
3M™ Scotch-Weld™ Structural Adhesive Film AF 3109-2

- Excellent performance in metal-to-metal and honeycomb sandwich applications in a -67° to 300°F (-55 to 149°C) temperature range.
- Cure temperature as low as 225°F (107°C) and up to 350°F (177°C).
- Improved resistance to high moisture pre-cure conditions.
- Unsupported version can be reticulated on honeycomb.

PRODUCT	SIZE	WT.	FILM COLOR	UPC
AF 3109-2K	7/8 in x 36 yds	.085	Blue	021200 23328 9
	48 in x 25 yds	.085	Blue	021200 23360 9
	48 in x 50 yds	.06	Blue	021200 23393 7
AF 3109-2U	48 in x 25 yds	.035	Blue	021200 23361 6
	48 in x 50 yds	.06	Blue	021200 41856 3

Adhesive Films — 250°F Cure

250°F (121°C) CURING EPOXY FILMS AT A GLANCE				
PRODUCTS*	AF 163-2	AF 3109-2	AF 500	AF 563
OLS @ 75°F (24°C)	5600 psi (38.6 MPa)	5500 psi (37.9 MPa)	6000 psi (41.4 MPa)	5500 psi (37.9 MPa)
Peel Strength:				
(a) Metal/metal floating roller	65 piw (11.4 N/mm)	45 piw (7.9 N/mm)	77 piw (343 N/25mm)	60 piw (10.5 N/mm)
(b) Honeycomb	75 ip3w (333 N/75mm)	60 ip3w (267 N/75mm)	75 ip3w (333 N/75mm)	60 ip3w (267 N/75mm)



3M™ Scotch-Weld™ Structural Adhesive Film AF 126 FR

- Flame retardant, thermosetting, toughened, epoxy adhesive film designed for structural bonding.
- Cure at temperatures as low as 180°F (82°C).
- Excellent strength for honeycomb sandwich applications.
- High degree of tack in the uncured state.
- Self-extinguishing

PRODUCT	SIZE	WT.	FILM COLOR	UPC
AF 126 FR	3/4 in x 36 yds	.06	Off-White	021200 20720 4
	1 in x 36 yds	.06	Off-White	021200 20721 1
	36 in x 36 yds	.06	Off-White	021200 20724 2

Adhesive Films — 250° Cure

3M™ Scotch-Weld™ Structural Adhesive Film AF 163-2

- Designed for both solid panel and honeycomb sandwich constructions.
- High bond strength from -67° to 250°F (-55° to 121°C).
- High fracture toughness and peel strength.
- Excellent resistance to high-moisture environments before and after curing.
- 240-minute cure time at 225°F (107°C).
- Capable of low pressure bonding.

PRODUCT	SIZE	WT.	COLOR	UPC
AF 163-2K	36 in x 50 yds	.045	Tan	021200 88069 8
	18 in x 60 yds	.06	Red	021200 64823 6
	5 3/4 in x 36 yds	.06	Red	021200 31712 5
	12 in x 36 yds	.06	Red	021200 19614 0
	36 in x 50 yds	.06	Red	021200 88070 4
AF 163-2L	40 in x 50 yds	.06	Red	021200 88091 9
	36 in x 50 yds	.085	Blue	021200 88071 1
AF 163-2M	36 in x 50 yds	.03	Pink	021200 88072 8
	36 in x 36 yds	.045	Tan	021200 64940 0
AF 163-2 OST	36 in x 50 yds	.06	Red	021200 88073 5
	36 in x 50 yds	.03	Green	021200 88074 2
	5 in x 36 yds	.06	Red	021200 22643 4
	18 in x 36 yds	.06	Red	021200 83487 5
	36 in x 50 yds	.06	Red	021200 88075 9
AF 163-2U	16 in x 100 yds	.03	Red	021200 65282 0
	36 in x 50 yds	.03	Red	021200 88076 6
	12 in x 36 yds	.06	Red	021200 20646 7
	18 in x 60 yds	.06	Red	021200 64824 3
	36 in x 50 yds	.06	Red	021200 88077 3
	48 in x 50 yds	.015	Tan	021200 49004 0

3M™ Scotch-Weld™ Structural Adhesive Film AF 500

- High bond strength from -67° to 300°F (-55° to 149°C).
- Minimum 45 days out-time at ambient temperatures.
- Controlled flow.
- Excellent composite bonding.
- Maintains good metal bonding performance.
- Composite co-cure adhesive with excellent peel.

PRODUCT	SIZE	WT.	FILM COLOR	UPC
AF 500 U	36 in x 50 yds	.015	Off-White	048011 56778 5
		.03	Off-White	021200 96393 3
		.03	Off-White	021200 96292 9
AF 500 OST	36 in x 50 yds	.06	Off-White	021200 96294 3
		.085	Off-White	021200 96296 7
AF 500 K	36 in x 50 yds	.045	Off-White	021200 96390 2
		.06	Off-White	021200 96304 9
		.085	Off-White	021200 96389 6
		.03	Off-White	021200 96298 1
		.045	Off-White	048011 56776 1
AF 500 M	36 in x 50 yds	.06	Off-White	021200 96300 1
		.085	Off-White	021200 96302 5

3M™ Scotch-Weld™ Structural Adhesive Film AF 563

- Designed for bonding skins to honeycomb.
- High bond strengths from -67° to 300°F (-55° to 149°C).
- Excellent durability in hot and wet environments and designed for applications where hot and wet service is required.

PRODUCT	SIZE	WT.	FILM COLOR	UPC
AF 563 K	36 in x 50 yds	.10	Red	021200 85145 2
	4 in x 50 yds	.06	Red	021200 96999 7
AF 563 M	36 in x 50 yds	.06	Red	021200 23343 2

3M™ Scotch-Weld™ Structural Adhesive Film AF 3109-2

- Excellent performance in metal-to-metal and honeycomb sandwich applications in a -67° to 300°F (-55 to 149°C) temperature range.
- Cure temperature as low as 225°F (107°C) and up to 350°F (177°C).
- Improved resistance to high moisture pre-cure conditions.
- Unsupported version can be reticulated on honeycomb.

PRODUCT	SIZE	WT.	FILM COLOR	UPC	
AF 3109-2K	48 in x 25 yds	7/8 in x 36 yds	.085	Blue	021200 23328 9
		.085	Blue	021200 23360 9	
		.06	Blue	021200 23393 7	
AF 3109-2U	48 in x 50 yds	48 in x 25 yds	.035	Blue	021200 23361 6
		.06	Blue	021200 41856 3	

3M™ Scotch-Weld™ Structural Adhesive Film AF 3185

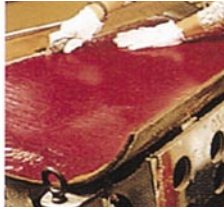
- Non-volatile, thermosetting, epoxy laminating adhesive and glass cloth combination.
- Designed for structural bonding and for the preparation of reinforced epoxy glass laminate.
- Cure at temperatures as low as 200°F (93°C).
- Easy to cut.
- Repositionable
- Excellent for vacuum or low pressure curing.

PRODUCT	SIZE	WT.	FILM COLOR	UPC
AF 3185	36 in x 50 yds	.05	Tan	021200 88089 6

Adhesive Films — Composite Surfacing

3M™ Scotch-Weld™ Composite Surfacing Lightning Strike Protection Film AF 163-2

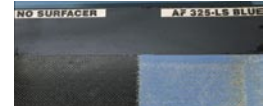
- Excellent for surfacing composites.
- Provides a smooth, void-free surface.
- Co-cure compatible with most epoxy composites.
- Compatible with 250°F (121°C) or 350°F (177°C) cure cycles.
- Eliminates most filling operations.



PRODUCT	SIZE	WT.	FILM COLOR	UPC
AF 163-2 XS	36 in x 50 yds	.045	Red	021200 96337 7
AF 163-2 LS	36 in x 50 yds	.060	Red	021200 96384 1

3M™ Scotch-Weld™ Low Density Composite Surfacing Lightning Strike Protection Film AF 325

- Excellent for surfacing composites.
- Provides a smooth, void-free surface.
- Co-cure compatible with most epoxy composites.
- Compatible with 250°F (121°C) or 350°F (177°C) cure cycles.
- Eliminates most filling operations.



PRODUCT	SIZE	WT.	FILM COLOR	UPC
AF 325	36 in x 36 yds	.035	Blue	021200 23333 3
	36 in x 50 yds	.035	Blue	021200 23334 0

3M™ Scotch-Weld™ Composite Surfacing/Lightening Strike Protection Film AF 191 XS

- Excellent for surfacing composites.
- Provides a smooth, void-free surface.
- Co-cure compatible with most epoxy composites.
- Compatible with 350°F (177°C) cure cycles.
- Eliminates most filling operations.

PRODUCT	SIZE	WT.	FILM COLOR	UPC
AF 191 XS	36 in x 50 yds	.045	Tan	048011 53234 9

3M™ Scotch-Weld™ Low Density Composite Surfacing/Lightening Strike Protection Films AF 325 LS

- Excellent for surfacing composites.
- Provides a smooth, void-free surface.
- Compatible with 250°F (121°C) or 350°F (177°C) cure cycles.
- Eliminates most filling operations.



PRODUCT	SIZE	WT.	FILM COLOR	UPC
AF 325 LS	30 in x 50 yds	.035	Blue	021200 23348 7

3M™ Scotch-Weld™ Composite Surface Lightning Strike Protection Film AF 555 XS

- Excellent for surfacing composites.
- Provides a smooth, void-free surface.
- Compatible with 250°F (121°C) or 350°F (177°C) cure cycles.
- Eliminates most filling operations.

PRODUCT	SIZE	WT.	FILM COLOR	UPC
AF 555 XS		.045		048011 53247 9

Adhesive Films — Nitrile Phenolic

NITRILE PHENOLIC ADHESIVE FILMS AT A GLANCE

PRODUCTS	AF 15	AF 30	AF 31	AF 32
OLS @ 75°F (24°C)	4000 psi (27.6 MPa)	4400 psi (30.3 MPa)	4000 psi (27.6 MPa)	3500 psi (24.1 MPa)
Peel Strength: Metal/metal floating roller	20 piw 3.5 N/mm)	35 piw (6.1 N/mm)	20 piw 3.5 N/mm)	55 piw (9.6 N/mm)



3M™ Scotch-Weld™ Structural Adhesive Film AF 15

- Unsupported film adhesive of nitrile-phenolic type, supplied with a protective liner.
- Offers the maximum in elevated temperature strength and still retains good flexibility, peel and low temperature properties.
- Produces exceptional strength characteristics with very short cures.

PRODUCT	SIZE	THICKNESS	FILM COLOR	UPC
AF 15	36 in x 18 yds	3 mils	Tan	021200 84941 1
	36 in x 50 yds	3 mils	Tan	021200 88066 7

3M™ Scotch-Weld™ Structural Adhesive Film AF 30

- Developed for structural bonding of metals and high strength plastic laminates (epoxy and phenolic).
- High shear strength.
- High peel strength.
- Excellent flexibility and toughness.

PRODUCT	SIZE	THICKNESS	FILM COLOR	UPC
AF 30	20 in x 72 yds	5 mils	Light Brown	021200 20304 6
	3 in x 72 yds	10 mils	Light Brown	021200 19989 9
	10 in x 72 yds	10 mils	Light Brown	021200 19997 4
	20 in x 72 yds	10 mils	Light Brown	021200 20004 5
	22 1/4 in x 72 yds	12 mils	Light Brown	021200 88010 0

3M™ Scotch-Weld™ Structural Adhesive Film AF 31

- Designed for metal-to-metal bonding in high-temperature resistant applications.
- Good flexibility and shear strength in the -67° to 500°F (-55° to 260°C) temperature range.
- Easy application in a dry film which can be pressure, heat, or solvent tacked in position.
- Excellent retention of strength after aging in many environments.

PRODUCT	SIZE	THICKNESS	FILM COLOR	UPC
AF 31	1 3/4 in x 36 yds	10 mils	Yellow to Brown	021200 82355 8
	20 in x 36 yds	10 mils	Yellow to Brown	021200 20014 4

3M™ Scotch-Weld™ Structural Adhesive Film AF 32

- Designed for structural bonding especially where high peel strengths or vibration damping is required.
- Good flexibility and shear strength.
- Low tack, dry film.
- Excellent adhesion to aluminum, titanium, stainless steel, cadmium, nickel, brass, phenolic, and epoxy (must use high bonding pressure).
- Extremely low flow.

PRODUCT	SIZE	THICKNESS	FILM COLOR	UPC
AF 32	20 in x 36 yds	10 mils	Yellow to Brown	021200 20027 4

Paste Adhesives: Two-Part Epoxy

TWO-PART PASTE ADHESIVES AT A GLANCE

PRODUCTS	EC-2216 B/A	EC-2615 B/A	EC-2615 B/A LW	EC-3333 B/A	DP100 FR	DP 190	DP 460	DP 420	DP125 Gray	DP 125 Trans
OLS @ 75°F (24°C)	2500 psi (23 MPa)	5500 psi (38 MPa)	5300 psi (37 MPa)	5500 psi (38 MPa)	1400 psi (10 MPa)	2500 psi (17 MPa)	4500 psi (31 MPa)	4500 psi (31 MPa)	4300 psi (30 MPa)	2500 psi (17 MPa)
Peel Strength: Metal/metal floating roller	25 piw (111 N/25mm)	70 piw (311 N/25mm)	60 piw (267 N/25mm)	50 piw (222 N/25mm)	2 piw (9 N/25mm)	20 piw (89 N/25mm)	60 piw (267 N/25mm)	50 piw (222 N/25mm)	35 piw (156 N/25mm)	35 piw (156 N/25mm)
Work Life	90 min.	20 min.	60 min.	20 min.	6 min.	90 min.	60 min.	20 min.	25 min.	25 min.
Flow		Non-sag	Non-sag							



A process of continuous improvement: 3M epoxies represent three distinct generations.

3M™ Scotch-Weld™ Epoxy Adhesive DP100 FR

- Flame retardant, two-part adhesive for bonding a variety of materials.
- Fast cure.
- Easy mixing meets UL 94 V-0 (File No. E61941)
- Passes 14 CFR 25.853 (60 sec. vertical burn test).
- In compliance with European Union's Restriction of Hazardous Substances (RoHS) Directive (2002/95/EC).



PRODUCT	SIZE		MIXED COLOR	UPC
DP100 FR	200 mL	Duo-Pak	Off-White	048011 56744 0
	400 mL	Duo-Pak	Off-White	021200 56743 3
	1.7 fl oz	Duo-Pak	Off-White	048011 56742 6
	5 Gal Pail	Acc	Off-White	021200 57230 7
	5 Gal Pail	Base	Off-White	021200 57229 1

3M™ Scotch-Weld™ Epoxy Adhesive DP125

- Two-part, epoxy adhesive used to bond rubber, metal, wood, plastics, and masonry products.
- 25 minute worklife.
- High peel and shear strength.
- Flexible



PRODUCT	SIZE		COLOR	UPC
DP125	200 mL	Duo-Pak	Translucent	021200 87842 8
	400 mL	Duo-Pak	Translucent	021200 87843 5
	1.7 oz	Duo-Pak	Translucent	021200 87211 2
	200 mL	Duo-Pak	Gray	021200 87844 2
	400 mL	Duo-Pak	Gray	021200 87845 9
	1.7 oz	Duo-Pak	Gray	021200 87215 0

Paste Adhesives: Two-Part Epoxy

3M™ Scotch-Weld™ Structural Adhesive DP190

- Gray flexible, two-part adhesive that cures at room temperature.
- Can be used to bond rubber, metal, wood, most plastics, and masonry products.
- 90 minute worklife.
- High shear and peel strength.
- Flexible



1555689

PRODUCT	SIZE	MIXED COLOR	UPC
DP190	1.7 fl oz Duo-Pak	Gray	021200 22647 2

3M™ Scotch-Weld™ Epoxy Adhesive DP420

- High performance, two-part epoxy adhesive offering outstanding shear and peel adhesion and very high levels of durability.
- High shear strength.
- Outstanding environmental performance.
- 20 minute worklife.

PRODUCT	SIZE	MIXED COLOR	UPC
DP420	200 mL Duo-Pak	Off-White	021200 87832 9
	1.25 fl oz Duo-Pak	Off-White	021200 82236 0

3M™ Scotch-Weld™ Structural Adhesive DP460

- High performance, two-part epoxy adhesive offering outstanding shear and peel adhesion and very high levels of durability.
- 60 minute worklife.
- Outstanding environmental performance.
- Easy mixing.



86001

PRODUCT	SIZE	COLOR	UPC
DP460	200 mL Duo-Pak	Off-White	021200 87830 5
	1.25 fl oz Duo-Pak	Off-White	021200 82225 4

3M™ Scotch-Weld™ Epoxy Adhesive 1838 B/A

- Two-part, room temperature curing, structural adhesive with high shear strength and excellent environmental resistance.
- Excellent for bonding many metals, woods, rubbers, and some plastics.

PRODUCT	SIZE	PART	COLOR	UPC
1838	2 oz Kit	B/A	B – White A – Green	021200 20148 6
	1 qt Kit	B/A	B – White A – Green	021200 20152 3
1838L	2 oz Kit	B/A	B – Clear A – Amber	021200 22645 8
EC-1838	1 qt Kit	B/A	Translucent	021200 65217 2

NOTE: 3M™ Scotch-Weld™ Epoxy Adhesive 1838 B/A is identical to 3M™ Scotch-Weld™ Epoxy Adhesive EC-1838 B/A in chemical composition. Scotch-Weld EC-1838 B/A adhesive has been labeled, packaged, tested, and certified for aircraft and aerospace applications.

Paste Adhesives: Two-Part Epoxy

3M™ Scotch-Weld™ Epoxy Adhesive 2216 B/A

- Flexible, two-part, room temperature curing epoxy with high peel and shear strength.
- Excellent for bonding many metals, woods, plastics, rubbers, and masonry products.
- Good retention of strength after environmental aging.
- Resistant to extreme shock, vibration, and flexing.
- Excellent for cryogenic bonding applications.



PRODUCT	SIZE	PART	MIXED COLOR	UPC
EC-2216 Gray	2 oz Tube Kit	B/A	Gray	021200 65201 1
	1 pt Kit	B/A	Gray	021200 65202 8
	1 qt Kit	B/A	Gray	021200 65203 5
	1 gal Kit	B/A	Gray	021200 65204 2
	5 gal	A	Gray	021200 65206 6
EC-2216 Translucent	5 gal	B	Gray	021200 65205 9
	1 pt Kit	B/A	Translucent	021200 65214 1
	1 gal Kit	B/A	Translucent	021200 65216 5
	5 gal	A	Translucent	021200 20925 3
	5 gal	B	Translucent	021200 65321 6
	5 gal	A	Translucent	021200 84904 6
	5 gal	B	Translucent	021200 84903 9
	1 gal Drum	A	Translucent	021200 82107 3
1 gal Drum	B	Translucent	021200 76341 0	

NOTE: 3M™ Scotch-Weld™ Epoxy Adhesive 2216 B/A is identical to 3M™ Scotch-Weld™ Epoxy Adhesive EC-2216 B/A in chemical composition. Scotch-Weld EC-2216 B/A adhesive has been labeled, packaged, tested, and certified for aircraft and aerospace applications.

3M™ Scotch-Weld™ Epoxy Adhesive EC-2615 B/A

- Epoxy adhesive that cures at room temperature or with heat to form a tough, impact-resistant bond.
- High shear strength.
- High peel strength.
- Outstanding environmental resistance.
- 20 minute worklife.
- Excellent adhesion to many metal and plastic substrates.

PRODUCT	SIZE	PART	MIXED COLOR	UPC
EC-2615	1.25 oz	B/A	Off-White	021200 26005 6
	1 qt Kit	B/A	Off-White	021200 23326 5
	200 mL	B/A	Off-White	021200 23397 5
	5 gal	B	Off-White	021200 23325 8
	5 gal	A	Amber	021200 23327 2

3M™ Scotch-Weld™ Epoxy Adhesive EC-2615 B/A LW

- Epoxy adhesive that cures at room temperature or with heat to form a tough, impact-resistant bond.
- High shear strength.
- High peel strength.
- Outstanding environmental resistance.
- 60 minute worklife.
- Excellent adhesion to many metal and plastic substrates.

PRODUCT	SIZE	PART	MIXED COLOR	UPC
EC-2615 LW	1.25 oz	B/A	Off-White	021200 26006 3
	1 qt Kit	B/A	Off-White	021200 23337 1
	5 gal	A	Off-White	021200 23336 4
	5 gal	B	Off-White	021200 23335 7
EC-2615 LW Charcoal	5 gal	A	Charcoal	048011 53230 1
	5 gal	B	Charcoal	048011 53232 5

3M™ Scotch-Weld™ Structural Epoxy Adhesive Kit EC-3333 B/A

- Two-component, epoxy adhesive which cures at room temperature or with heat to form a tough, impact resistant bond.
- Excellent adhesion to many metal and plastic substrates.
- Extremely high shear strength.
- Extremely high peel strength.
- Outstanding environmental resistance.
- 20 minute worklife.

PRODUCT	SIZE	PART	MIXED COLOR	UPC
EC-3333	5 gal	B	Gray	021200 88095 7
	5 gal	A	Gray	021200 88096 4
	1 gal Kit	B/A	Gray	021200 88094 0

3M™ Scotch-Weld™ Adhesive and Sealant Kit EC-3537

- Designed to cure at room temperature of 70–80°F (21–27°C).
- Cured material exhibits excellent flexibility and adhesion.
- Low flow, soft paste viscosity permits application on vertical or overhead surfaces with a minimum of run-off.

PRODUCT	SIZE	PART	COLOR	UPC
EC-3537	1 gal	B/A	B – Off-White A – Medium Gray	021200 20894 2

Paste Adhesives: One-Part Epoxy

ONE-PART, HEAT-CURING EPOXY ADHESIVES AT A GLANCE

PRODUCTS	EC-2214R	EC-2214 HT	EC-2214 HTNF	EC-3448
OLS @ 75°F (24°C)	4500 psi (31 MPa)	2000 psi (13.8 MPa)	3191 psi (22 MPa)	6000 psi (41.4 MPa)
Metal/metal T-peel 75°F (24°C)	5 piw (8.8 N/cm)	2 piw (3.5 N/cm)	—	30 piw (52.2 N/cm)
Feature	Non-sag	Temperature Resistance	Temperature Resistance	Environmental Aging

3M™ Scotch-Weld™ Epoxy Adhesive EC-1386

- One-part, 100% solids, thermosetting liquid adhesive.
- Exceptionally high strength properties at service temperatures from -70 to 250°F (56° to 121°C).
- Higher impact, peel, and bond strength properties than normally attainable in many epoxy-based adhesives.

PRODUCT	SIZE	COLOR	UPC
EC-1386	1 qt	Cream	021200 19917 2
	5 gal	Cream	021200 65235 6

NOTE: 3M™ Scotch-Weld™ Epoxy Adhesive 1386 is identical to 3M™ Scotch-Weld™ Epoxy Adhesive EC-1386 in chemical composition. Scotch-Weld EC-1386 adhesive has been labeled, packaged, tested, and certified for aircraft and aerospace applications.

3M™ Scotch-Weld™ Epoxy Adhesive EC-2214

- Aluminum filled, one-part, heat-curable, paste consistency and low temperature (250°F/121°C) curing.
- High strength bonds are obtainable with many metals, glass and some plastics.



PRODUCT	DESCRIPTION	SIZE	COLOR	UPC
EC-2214	Regular	6 oz	—	021200 65197 7
2214	Regular	6 oz	—	021200 20344 2
EC-2214	Hi-Density	6 oz	—	021200 65212 7
2214	Hi-Density	6 oz	Gray	021200 20813 3
2214 HTNF	Hi-temperature	6 oz	Gray	021200 20806 5
2214 NMF	Non-Metallic	6 oz	Cream	021200 25496 3
EC-2214	Regular	1 qt	—	021200 65198 4
2214	Regular	5 gal	Gray	021200 20347 3

NOTE: 3M™ Scotch-Weld™ Epoxy Adhesive 2214 is identical to 3M™ Scotch-Weld™ Epoxy Adhesive EC-2214 in chemical composition. Scotch-Weld EC-2214 adhesive has been labeled, packaged, tested, and certified for aircraft and aerospace applications.

3M™ Scotch-Weld™ Structural Adhesive EC-3448

- Designed to bond pre-cured, graphite epoxy composites.
- Excellent performance from -67°F (55°C) to 225°F (107°C).
- Unusually high 180°F (82°C) hot/wet durability.
- Thixotropic for non-sag properties during cure.



PRODUCT	SIZE	COLOR	UPC
EC-3448	6 oz	Light Tan	021200 65429 9

Two-Part Urethanes

TWO-PART URETHANES AT A GLANCE

PRODUCTS	EC 3532 B/A	EC 3535 B/A	EC 3549 B/A
OLS @ 75°F (24°C)	2800 psi (19 MPa)	3100 psi (21 MPa)	2400 PSI (17MPa)
Metal/metal T-peel 75°F (24°C)	20 piw (89 N/cm)	20 piw (89 N/cm)	20 piw (89 N/cm)
Work Life	5–15 mins.	45–240 secs.	40–70 secs.

3M™ Scotch-Weld™ Urethane Adhesive DP605 NS

- Two-part, non-sag urethane adhesive.
- Tough, flexible bonds.
- 5–40 minute worklife.
- Non-Sag/Thixotropic
- Bonds wood and many plastics.

PRODUCT	SIZE	COLOR	UPC
DP605 NS	200 mL Duo-Pak	Off-White	021200 87853 4
	400 mL Duo-Pak	Off-White	021200 87854 1
	1.7 fl oz Duo-Pak	Off-White	021200 82252 0

3M™ Scotch-Weld™ Urethane Adhesive Kit 3532 B/A

- Two-component, polyurethane adhesive which cures at room temperature.
- Forms tough, impact-resistant structural bonds.
- Excellent adhesion to many primed or painted metal and plastic substrates.
- Designed to develop sag resistance approximately 30 seconds after mixing.
- Work life for 100 grams mixed at 75°F (24°C) is 5–15 minutes.

PRODUCT	SIZE	PART	COLOR	UPC
3532	2 oz Kit	B/A	Brown	021200 20878 2
	1 qt Kit	B/A	Brown	021200 65219 6
	5 gal	B	Brown	021200 65220 2
	5 gal	A	Brown	021200 65226 4

NOTE: 3M™ Scotch-Weld™ Epoxy Adhesive 3532 is identical to 3M™ Scotch-Weld™ Epoxy Adhesive EC-3532 in chemical composition. Scotch-Weld EC-3532 adhesive has been labeled, packaged, tested, and certified for aircraft and aerospace applications.

3M™ Scotch-Weld™ Urethane Adhesive 3535 B/A

- Two-component, polyurethane adhesive which cures at room temperature.
- Forms tough, impact-resistant structural bonds.
- Excellent adhesion to many primed or painted metal and plastic substrates.
- Designed to develop sag resistance approximately 30 seconds after mixing.
- Work life for 100 grams mixed at 75°F (24°C) is 45–240 seconds.

PRODUCT	SIZE	PART	COLOR	UPC
3535	1 qt Kit	B/A	Off-White	021200 20887 4
	5 gal Pail	B	Off-White	021200 45216 1
	5 gal Pail	A	Off-White	021200 45217 8

NOTE: 3M™ Scotch-Weld™ Epoxy Adhesive 3535 is identical to 3M™ Scotch-Weld™ Epoxy Adhesive EC-3535 in chemical composition. Scotch-Weld EC-3535 adhesive has been labeled, packaged, tested, and certified for aircraft and aerospace applications.

3M™ Scotch-Weld™ Urethane Adhesive EC-3549 B/A

- Two-part urethane adhesive cures at room temperature.
- Impact-resistant, high peel strength bonds on primed or painted metal and plastics.
- 60 minute work life at 75°F (24°C).

PRODUCT	SIZE	PART	COLOR	UPC
EC-3549	2 oz	B/A	Brown	021200 20901 7
	1 qt Kit	B/A	Brown	021200 65223 3

NOTE: 3M™ Scotch-Weld™ Epoxy Adhesive 3549 is identical to 3M™ Scotch-Weld™ Epoxy Adhesive EC-3549 in chemical composition. Scotch-Weld EC-3549 adhesive has been labeled, packaged, tested, and certified for aircraft and aerospace applications.

3M™ Scotch-Weld™ Urethane Adhesive EC-3587 B/A

- Two-part polyurethane that cures at room temperature or with heat to form a tough, impact-resistant material.
- Excellent adhesion to many metal and plastic substrates.
- Excellent void or gap filler.
- Excellent fairing compound.
- Sandable.

PRODUCT	SIZE	PART	MIXED COLOR	UPC
EC-3587	1 qt Kit	B/A	Gray	021200 84993 0
Class B-1/4	1 qt Kit	B/A	Gray	021200 84992 3
	1 qt Kit	B/A	Gray	021200 84996 1
EC-3587 Class B-1	1 qt Kit	B/A	Gray	021200 84995 4
	1 gal	B/A	Gray	021200 84994 7

One-Part Liquid Adhesives

ONE-PART LIQUID STRUCTURAL ADHESIVES AT A GLANCE			
PRODUCTS	EC-3710	EC-3964	EC-3984
OLS @ 75°F (24°C)	5000 psi (34.5 MPa)	4700 psi (32.4 MPa)	5000 psi (34.5 MPa)
Peel Strength Metal/metal floating roller	65 piw (285 N/25mm)	31 piw (138 N/25mm)	40 piw (178 N/25mm)
Cure Temperature	350°F (177°C)	350°F (177°C)	250°F (121°C)

3M™ Scotch-Weld™ Structural Adhesive EC-3710

- Sprayable structural adhesive.
- Can be used to hold screens or other components in place which need structural adhesive strength at elevated temperatures.
- Extremely strong at low or high temperatures.
- Can be brushed, roll coated, or sprayed in place.

PRODUCT	SIZE	COLOR	UPC
EC-3710	1 gal	Clear	021200 82316 9
	5 gal	Blue	021200 23323 4

3M™ Scotch-Weld™ Structural Adhesive EC-3964

- Structural adhesive used to bond screen in sound suppression panels on aircraft engine nacelles.
- Can be sprayed on screen without filling holes.
- Cured bonds have high shear and peel strength.
- Excellent performance to 350°F (177°C).
- Can be sprayed, brushed, or flow applied.

PRODUCT	SIZE	COLOR	UPC
EC-3964	1 gal	Light Tan	021200 30378 4*
	1 gal	Light Tan	021200 21113 3

* Multi-lingual

3M™ Scotch-Weld™ Structural Adhesive Primer EC-3984

- Liquid, sprayable structural adhesive with improved high temperature performance compared to conventional 250°F (121°C) curing adhesives.
- Cure temperature ranges from 225°F (107°C) to 350°F (177°C).
- Excellent strength from -67°F (-55°C) to 300°F (149°C) in either metal-to-metal or honeycomb sandwich applications.
- Easily applied by spraying.
- Viscosity minimizes blockage on perforated acoustic components.

PRODUCT	SIZE	COLOR	UPC
EC-3984	1 qt	Blue	021200 85011 0

Polyurethane Reactive Adhesives

3M™ Scotch-Weld™ Polyurethane Reactive Adhesives are a family of one-component, moisture curing, urethane adhesives. These adhesives are applied warm and can bond a wide variety of substrates such as wood, fiber reinforced plastics (FRP), and many other plastics to themselves, to metal, and to glass.

3M™ Scotch-Weld™ Polyurethane Reactive Adhesive TE031

- Extrudable grade adhesive with fast set time.
- Ideal for bonding a wide variety of plastics including polystyrene and polyacrylic.

PRODUCT	SIZE	COLOR	UPC
TE031	1/10 gal Cartridge	Off-White	021200 83694 7
	5 gal Pail (36 lbs)*	Off-White	021200 83695 4

* Specialty PUR equipment required.

3M™ Scotch-Weld™ Polyurethane Reactive Adhesive TE200

- Extrudable grade adhesive with fast set time.
- Long open time ideal for bonding wood.
- Yields thin glue lines.

PRODUCT	SIZE	COLOR	UPC
TE200	1/10 gal Cartridge	White/Off-White	021200 89586 9
	5 gal Pail (36 lbs)*	White/Off-White	021200 89588 3

* Specialty PUR equipment required.

3M™ Scotch-Weld™ Polyurethane Reactive Adhesive TS230

- Sprayable/extrudable grade adhesive with long set time.
- Ideal for bonding a wide variety of plastics including polystyrene and polyacrylic.
- Bonds aluminum and glass to plastic and wood.

PRODUCT	SIZE	COLOR	UPC
TS230	1/10 gal Cartridge	White/Off-White	021200 83640 4
	5 gal Pail (36 lbs)*	White/Off-White	021200 83643 5

* Specialty PUR equipment required.

Accessories for Duo-Pak Cartridges

	DESCRIPTION	UPC
EPX™ Plus II Manual Applicator—50 mL		
	EPX Plus II Manual Applicator 9170 — 50 mL (Includes 1:1 and 2:1 Plungers) Can dispense 50 mL 1:1, 37 mL 2:1, 43 mL 3:2	021200 50004 6
	1:1 Plunger	021200 50005 3
	2:1 Plunger	021200 50006 0
	EPX Mixing Nozzle for 50 mL Applicator	021200 21791 3
	EPX Mixing Nozzle for 50 mL Applicator (Bulk)	021200 85801 7
	EPX Plus II Mixing Nozzle — Square Gold, 5.3 mm	021200 50008 4
	EPX Plus II Mixing Nozzle — Square Gold, 5.3 mm (Bulk)	021200 50009 1
	EPX™ Metal Manual Applicator—50 mL	
	EPX Metal Manual Applicator — 50 mL (Includes 2:1 Plunger) Can dispense 50 mL 1:1, 37 mL 2:1, 43 mL 3:2	021200 21789 0
	EPX 2:1 Plunger Assembly for 50 mL Applicator	021200 82314 5
	EPX Mixing Nozzle for 50 mL Applicator	021200 21791 3
	EPX Mixing Nozzle for 50 mL Applicator (Bulk)	021200 85801 7
	EPX Plus II Mixing Nozzle — Square Gold, 5.3 mm	021200 50008 4
	EPX Plus II Mixing Nozzle — Square Gold, 5.3 mm (Bulk)	021200 50009 1
	EPX™ Pneumatic Applicator—50 mL	
	EPX Pneumatic Applicator — 50 mL (Configured with 2:1 Plunger) Can dispense 50 mL 1:1, 37 mL 2:1, 43 mL 3:2	021200 83528 5
	EPX Mixing Nozzle for 50 mL Applicator	021200 21791 3
	EPX Mixing Nozzle for 50 mL Applicator (Bulk)	021200 85801 7
	EPX Plus II Mixing Nozzle — Square Gold, 5.3 mm	021200 50008 4
	EPX Plus II Mixing Nozzle — Square Gold, 5.3 mm (Bulk)	021200 50009 1
	EPX™ Manual Applicator—200 mL	
	EPX Manual Applicator — 200 mL Dispenses 1:1, 2:1 200 mL Cartridges	021200 87977 7
	EPX 6 mm Nozzle for 200 mL / 400 mL Cartridges	021200 87982 1
	EPX Plunger for 200 mL Manual Applicator	021200 87981 4
	EPX™ Pneumatic Applicator—200 mL	
	EPX Manual Applicator — 200 mL Dispenses 1:1, 2:1 200 mL cartridges	021200 87978 4
	EPX 6 mm Nozzle for 200 mL / 400 mL Cartridges	021200 87982 1
	EPX™ Pneumatic Applicator—400 mL	
	EPX Pneumatic Applicator — 400 mL Dispenses 1:1, 2:1 400 mL cartridges	021200 87979 1
	EPX 6 mm Nozzle for 200 mL / 400 mL Cartridges	021200 87982 1

Silane-Based Primer

3M™ Scotch-Weld™ Metal Primer EC-3901

- Used to obtain improved metal and glass adhesion.
- Ensures complete wetting of film adhesive to adherend surfaces.
- Simplifies production scheduling by protecting the cleaned surfaces until the bonding operations can be completed.

PRODUCT	SIZE	COLOR	UPC
EC-3901	1/2 pt	Red	021200 21087 7

Low VOC Primer

3M™ Scotch-Weld™ Structural Adhesive Primer EW-5000

- Sprayable, water-based, low VOC, heat curing, chromated primer.
- Corrosion inhibiting package for excellent corrosion protection.
- VOC is 178 g/liter (meets SCAQMD Rule 1124).
- High spray transfer efficiency.
- 3–6 times higher coverage compared to solvent-based primers.
- Can be sprayed or brush applied.

PRODUCT	SIZE	COLOR	UPC
EW-5000	1 qt	Yellow	021200 56686 8
	5 gal	Yellow	021200 56687 5



Spraying 3M™ Scotch-Weld™ Structural Adhesive Primer EW-5000 with 3M™ PPS™ Paint Preparation System

Non-Chromated, Low VOC Primer

3M™ Scotch-Weld™ Structural Adhesive Primer EW-5000 AS

- Complies with OSHA 29 CFR 1910.1026.
- Non-chromated, corrosion inhibiting package.
- Less than 5 minutes to flash off into an integrated non-tacky film.
- Will air dry in 15–30 minutes, depending on humidity and temperature.
- Thickness can be accurately measured pre-bake with a thickness gauge.
- Compatible with most automated spray equipment.

PRODUCT	SIZE	COLOR	UPC
EW-5000 AS	1 qt	Green	021200 74232 3
	1 gal	Green	048011 53099 4
	5 gal	Green	021200 74233 0



3M™ Scotch-Weld™ Structural Adhesive Primer EW-5000 AS

Epoxy-Based Primers

3M™ Scotch-Weld™ Structural Adhesive Primer EC-1945 B/A

- Two-part chemically curing, corrosion resistant primer.
- Cures at room temperature.
- Excellent adhesion to metals.
- Excellent sprayability.
- Long application time (up to 8 hours).

PRODUCT	SIZE	COLOR	UPC
EC-1945	1 qt Kit	B – Green A – Yellow	021200 26010 0
	1 gal Kit	B – Green A – Yellow	021200 26012 4

3M™ Scotch-Weld™ Structural Adhesive Primer EC-3917

- Contains a corrosion inhibitive pigment for added corrosion protection.
- Ensures complete wetting of the adhesive to the adherends.
- Improves durability of bonded joint.
- Protects cleaned surfaces.
- Can be sprayed or brush applied.

PRODUCT	SIZE	COLOR	UPC
EC-3917	1 pt	Yellow/Green	021200 21098 3
	1 qt	Yellow/Green	021200 21099 0
	1 gal	Yellow/Green	021200 21101 0
	5 gal	Yellow/Green	021200 45205 5

3M™ Scotch-Weld™ Structural Adhesive Primer EC-3924 B

- Sprayable or brushable corrosion inhibiting adhesive primer.
- Complete wetting of the adhesive to the adherends.
- Can be spray, brush or roller applied.
- Improves durability of bonded joint.
- Protects cleaned surfaces.
- Can be used as a corrosion resistant coating.



63287

PRODUCT	SIZE	COLOR	UPC
EC-3924 B	1 qt	Yellow	021200 21107 2
	1 gal	Yellow	021200 21108 9

3M™ Scotch-Weld™ Structural Adhesive Primer EC-3960

- Sprayable, corrosion inhibiting adhesive primer.
- Capable of high transfer efficiency (less overspray waste).
- Provides corrosion protection inside and outside the bondline.
- Provides long-term durability to bonded joints.
- Protects etched and anodized substrates for long-term storage.
- When cured at 250°F (121°C), the primer provides a solvent resistant coating.
- Can be co-cured with adhesives at 250° or 350°F (121° or 177°C).



63285

PRODUCT	SIZE	COLOR	UPC
EC-3960	1 qt	Yellow	021200 41617 0
	1 gal	Yellow	021200 45204 8
	1 gal	Yellow	021200 45207 9

Phenolic-Based Primers

3M™ Scotch-Weld™ Structural Adhesive Primer EC-1290

- Simplify production scheduling by protecting the cleaned surfaces until the bonding operations can be completed.
- Improved resistance to environmental exposures.
- Improved adhesion at elevated temperatures.

PRODUCT	SIZE	COLOR	UPC
EC-1290	1 gal	Clear to Light Amber	021200 65477 0
	5 gal	Clear to Light Amber	021200 20074 8

3M™ Scotch-Weld™ Structural Adhesive Primer EC-1593

- Sprayable primer for use with 3M™ Scotch-Weld™ Structural Adhesive Film AF 30.
- Ensures complete wetting of film adhesive to the adherend surfaces.
- Cured primer protects cleaned surfaces for future adhesive bonding (up to 90 days).
- Primer color changes upon curing (blue to green).
- Imparts corrosion protection to the metal.

PRODUCT	SIZE	COLOR	UPC
EC-1593	1 gal	Blue to Green	021200 20028 1
	5 gal	Blue to Green	021200 20029 8

3M™ Scotch-Weld™ Structural Adhesive Primer EC-1660

- Improved adhesion and improved resistance to environmental exposure.
- Non-chromated.
- Ensures complete wetting of film adhesive to adherend surfaces.
- Protects cleaned metal surfaces until bonding operations can be completed (up to six months).
- Imparts corrosion protection to metal.



PRODUCT	SIZE	COLOR	UPC
EC-1660	1 gal	Green	021200 20468 5
	5 gal	Green	021200 20469 2

3M™ Scotch-Weld™ Structural Adhesive Primer EC-2174

- Primer suggested for use with 3M™ Scotch-Weld™ Structural Adhesive Film AF 31.
- Ensures complete wetting of film adhesive to adherend surfaces.
- Simplify production scheduling by protecting the cleaned surfaces until the bonding operations can be completed.
- Imparts improved corrosion protection to the metal.
- Retains high shear strength to 500°F (260°C) on 17-17PH stainless steel when used with Scotch-Weld AF 31 film.

PRODUCT	SIZE	COLOR	UPC
EC-2174	5 gal	Tan to Clear	021200 30380 7*
	5 gal	Tan to Clear	021200 20286 5

* Europe Only

PRIMER/ADHESIVE FILM MATCHING GUIDE

Description		Primers	Adhesive
Solvent-Based	Nitrile Phenolic	EC-1290	AF 6, 10, 13 Film
		EC-1660	AF 30, 31, 32 Film
		EC-2174	AF 15, 31 Film
	Epoxy	EC-3917	Universal corrosion inhibiting, 350°F (177°C) cure
		EC-3924B	AF 126, 126-2, 163-2, 500 Films
		EC-3960	Universal corrosion inhibiting, 250°F (121°C) cure
		EC-1945 B/A	Room temperature curing adhesion promoter — works very well with two-part paste adhesives.
Water-based	EW-5000	AF 163-2, 500 and AF 555	
Water-based, non-chromated	EW-5000AS	AF 163-2, 500 and AF 555	

Void Fillers

TWO-PART CORE POTTING COMPOUNDS AT A GLANCE

PRODUCTS	EC-3439	EC-3500 B/A	EC-3524 B/A
Cured Density	31.2 lb/ft ³ (0.5 g/cc)	42.4 lb/ft ³ (0.68 g/cc)	31.2 lb/ft ³ (0.5 g/cc)
Compression Strength psi/MPa 75°F (24°C)	2500/17.2	7768/50.8	3263/22.5

3M™ Scotch-Weld™ Void Filler EC-3500 B/A

- High performance in the -67° to 350°F (-55° to 177°C) temperature range.
- Low density.
- Long worklife.
- Low volatile loss during cure.

PRODUCT	SIZE	PART	MIXED COLOR	UPC
EC-3500 B/A	1.1 lb	A	Gray	021200 20914 7
	.75 lb	B	Gray	021200 20839 3

3M™ Scotch-Weld™ Void Filling and Edge Sealing Compound EC-3524 B/A

- Two-part, flame retardant epoxy.
- Can be used for void filling, edge sealing, and as an abrasible compound in aircraft engines.
- Cures to a strong, low density material within 48 hours at 75°F (24°C).
- Meets the flammability requirements of F.A.R. 25.853 (a) and (b).
- Reinforces honeycomb.
- Can be used for bonding inserts.



PRODUCT	SIZE	COLOR	UPC
EC-3524 B/A	1/2 gal Kit	Blue	021200 20871 3

3M™ Scotch-Weld™ Void Filling Compound EC-3439

- Epoxy used for filling voids and honeycomb core.
- Cures to a rigid, solvent resistant material in one hour at 250°F (121°C).
- The compound has thixotropic properties for ease of application.
- Cured material is flame retardant.
- Meets the flammability requirements of F.A.R. 25.853 (a).

PRODUCT	DESCRIPTION	SIZE	COLOR	UPC
EC-3439	Potting Compound	1 gal	Off-White	021200 64907 3
		5 gal	Off-White	021200 20822 5
EC-3439 HS AF	Potting Compound	1 gal	Off-White	021200 84890 2
		5 gal	Off-White	021200 85170 4

3M™ Scotch-Weld™ Void Filler SW 3500-2 B/A

- Two components can be stored at room temperature.
- Long work-life at room temperature.
- 1:1 ratio and thixotropic features for ease of application.
- Excellent water and chemical resistance.

PRODUCT	DESCRIPTION	SIZE	COLOR	UPC
SW 3500-2 B/A	Void Filling Compound	10 lb kit		

3M™ Scotch-Weld™ Void Filler SW 3500-2 pmf-PreMixed Frozen

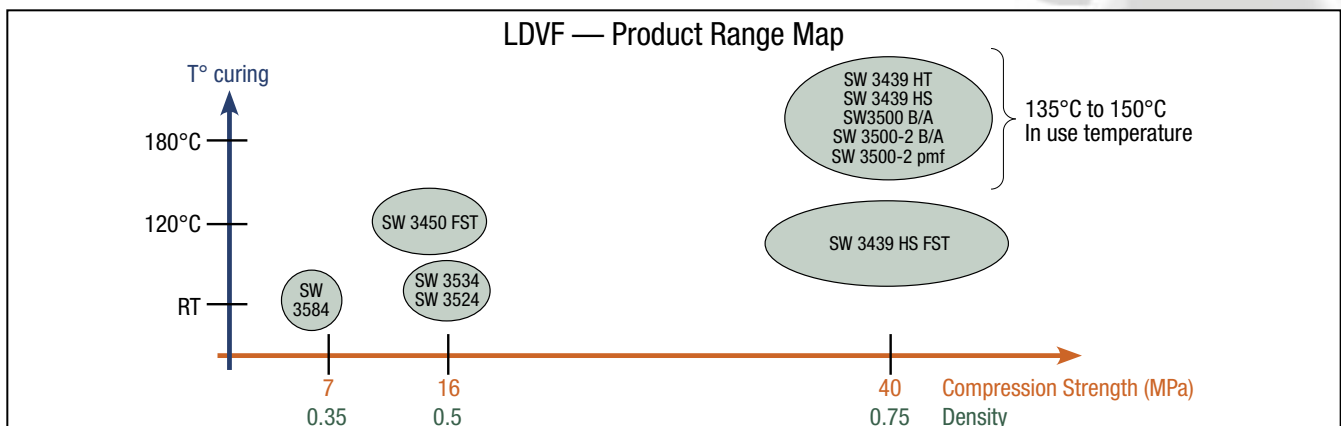
- Deaerated product to minimize bubbles in final potting.
- Fast cure (1 hour).
- Low cure density.
- Low flow for ease of application.
- Excellent water and chemical resistance.

PRODUCT	DESCRIPTION	SIZE	COLOR	UPC
SW 3500-2 pmf	Low Density Void Filler	750ml cartridge		

3M™ Scotch-Weld™ Void Filler SW 3450 FST

- Extreme low density and weight. Pumpable.
- Full stand alone FST properties with patented non-halogen based FST system.
- Low flow for ease of application.

PRODUCT	DESCRIPTION	SIZE	COLOR	UPC
SW 3500-2 pmf	One-part void filling compound	20L pail		



Coatings

3M™ Fuel Resistant Coatings EC-776

- General purpose, solvent-based adhesive/coating with good adhesion to synthetic rubber, metal, glass, and many plastics.
- Resists oil, gasoline, and aromatic fuels (non-resistant to fuels containing alcohol).

PRODUCT	SIZE	COLOR	UPC
EC-776	1 qt	Transparent Amber	021200 19668 3
	5 gal	Transparent Amber	021200 19671 3
EC-776SR*	1 qt	Transparent Red	021200 65184 7
	5 gal	Transparent Red	021200 20016 8

* Includes a soluble red dye for identification purposes.

3M™ Scotch-Weld™ Elastomeric Coating EC-2241

- White, synthetic-based product which is used as a protective coating for rubber and cork.
- Protects vulcanized synthetic rubber against ozone attack.
- Provides protection against the passage of water vapor, abrasion, ultra violet light, and weathering.
- Mildew and fungus resistant.
- Can be sprayed, brushed, or flow coated onto parts.

PRODUCT	SIZE	COLOR	UPC
EC-2241	1 gal	White	021200 20384 8

3M™ Scotch-Weld™ Elastomeric Coating EC-5816

- One-part, abrasion and chemical resistant coating designed for the protection of fragile, porous insulation materials.
- Forms a tough, flexible, abrasion-resistant coating.
- Resists heat, flame, and weathering.
- Resists gasoline, aircraft fuel, hydraulic oil, and water.
- Can be applied by spraying, brushing, or flow coating.

PRODUCT	SIZE	COLOR	UPC
EC-5816	1 gal	White	021200 21639 8

Core Splice Films

CORE SPLICE FILMS AT A GLANCE

PRODUCTS	AF 3002	AF 3024	AF 3028
Cured Density #/ft ³ (g/cc)	38/0.61	24/0.38	31/0.50
Expansion Ratio	2.9	2.5	2.0
Tube Shear:			
250°F (121°C) cure 75°F (24°C)	1520 psi (10.5 MPa)	1500 psi (10.3 MPa)	1150 psi (7.9 MPa)
350°F (177°C) cure 350°F (177°C)	1200 psi (8.3 MPa)	300 psi (2.1 MPa)	565 psi (3.5 MPa)

3M™ Scotch-Weld™ Structural Core Splice Adhesive Film AF 3002

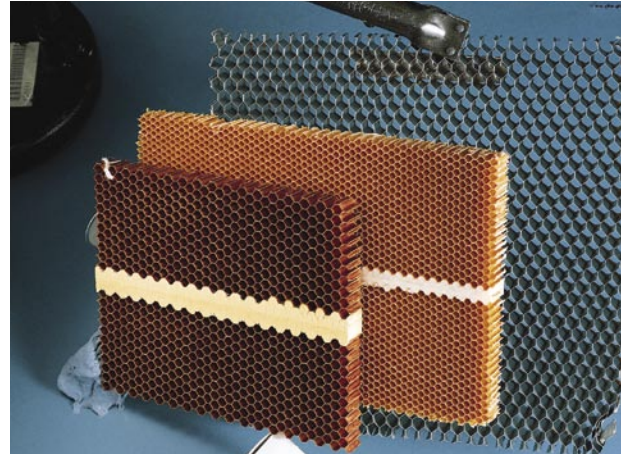
- 250° to 350°F (121° to 177°C) curing, low density, expandable product designed for the purpose of filling mismatched areas and for splicing and reinforcing honeycomb core.
- High performance in the -67° to 250°F (-55° to 121°C) temperature range when cured at 250°F (121°C).
- High performance in the -67°F to 350°F (-55°C to 177°C) temperature range when cured at 350°F (177°C).

PRODUCT	SIZE	THICKNESS	FILM COLOR	UPC
AF 3002	10 in x 24 in sheet	50 mils	Off-White	021200 20581 1
	20 in x 36 yds	50 mils	Off-White	021200 20585 9
	20 in x 18 yds	50 mils	Off-White	021200 26055 1

3M™ Scotch-Weld™ Structural Core Splice Adhesive Film AF 3024

- 250° to 350°F (121° to 176°C) curing, low density, expandable core splice adhesive film.
- High expansion (250%).
- Low sag during cure.
- Low volatile loss.
- High performance from -67° to 350°F (-55° to 176°C).

PRODUCT	SIZE	THICKNESS	FILM COLOR	UPC
AF 3024	10 in x 24 in sheet	25 mils	Off-White	021200 65292 9
	1 in X 325 in	50 mils	Off-White	021200 64815 1
	3 1/4 in x 325 in	50 mils	Off-White	021200 41624 8
	10 in x 24 in sheet	50 mils	Off-White	021200 20621 4
	10 in x 24 in sheet	50 mils	Off-White	021200 20620 7
	20 in X 36 yds	50 mils	Off-White	021200 64911 0



3M™ Scotch-Weld™ Structural Core Splice Adhesive Film AF 3028

- 250° to 350°F (121° to 176°C) curing, low density, expandable core splice adhesive film.
- Expands during cure for void filling and core splicing.
- Low sag during cure.
- Low volatile loss during cure.
- High performance from -67° to 350°F (-55° to 176°C).

PRODUCT	SIZE	THICKNESS	FILM COLOR	UPC
AF 3028	1 in x 325 in	50 mils	Off-White	021200 96250 9
	3/4 in x 216 in	50 mils	Off-White	021200 96249 3
	1 1/4 in x 325 in	50 mils	Off-White	021200 20624 5
AF 3028 FR*	1 1/4 in x 325 in	50 mils	Off-White	021200 64905 9

* Flame retardant properties.

3M™ Scotch-Weld™ Structural Core Splice Adhesive Film AF 3070 FST

- Designed for interior edge finishing and core splicing of sandwich panels.
- Full stand alone FST properties, meets FAR 25.853 or ABD 0031.
- Dual curing system (250°F to 350°F).
- Low expansion.
- Low density.
- Halogen-free FST system.

PRODUCT	SIZE	THICKNESS	FILM COLOR	UPC
AF 3070 FST	12 in x 22 in	50 mils		
	12 in X 22 in	100 mils		

3M™ Scotch-Weld™ Structural Core Splice Adhesive Film AF 3090 TEF

- Designed for exterior edge finishing.
- Combination of toughness and flexibility.
- Dual curing system (250°F to 350°F).
- First foaming material with good impact resistance.

PRODUCT	SIZE	THICKNESS	FILM COLOR	UPC
AF 3090 TEF	12 in x 22 in	50 mils		
	12 in X 22 in	100 mils		

Sealants

3M™ Scotch-Seal™ Tamper Proof Sealant EC-1252

- One-part, fast drying, anti-tamper sealer.
- Commonly used by aircraft industry to indicate sabotage, tampering, alteration or vibration loosening.
- Exposed surfaces of Scotch-Seal EC-1252 sealant will accept ink from an inspector's approval stamp within 20 seconds of application.
- Will not support fungus growth.



PRODUCT	SIZE	COLOR	UPC
EC-1252	5 oz.	Blue	021200 20176 9
	5 oz.	Orange	021200 20177 6
	5 oz.	Green	021200 20178 3
	5 oz.	Pink	021200 20179 0
	5 oz.	Gray	021200 20181 3
	5 oz.	White	021200 20194 3
	5 oz.	Yellow	021200 37995 6
	5 oz.	Purple	021200 45252 9
	5 oz.	Red	021200 88031 5

Rubber and Gasket/Contact Adhesives



11822

3M™ Fastbond™ Contact Adhesive 10

- Brushable, neutral-colored contact adhesive for bonding.

PRODUCT	SIZE	COLOR	UPC
10	1 qt	Neutral	021200 20272 8
	1 gal	Neutral	021200 20274 2

3M™ Fastbond™ 30NF Contact Adhesive

- Water-dispersed, high-strength contact adhesive.
- High coverage.
- Long bonding range.
- Good heat resistance.
- Non-flammable in the wet state.



89457

PRODUCT	SIZE	COLOR	UPC
30NF	1 gal	Green	021200 21186 7
	1 gal	Neutral	021200 21181 2
	5 gal Pail	Neutral	021200 21182 9

3M™ Fastbond™ Foam Adhesive 100

- Fast setting adhesive.
- Gives soft, non-dimpling bondlines.
- Bonds flexible polyurethane foam to itself and many other surfaces.



283831

PRODUCT	SIZE	COLOR	UPC
100	55 gal (52) Open Head Drum	Neutral	021200 39204 7

3M™ Fastbond™ Contact Adhesive 2000NF

- Water-dispersed, high solids activated adhesive.
- Immediate bonding capabilities and handling strength without forced drying equipment.
- Post-formable and heat resistant.



8382

PRODUCT	SIZE	COLOR	UPC
2000NF	5 gal (activator not included)	Blue	021200 25439 0
	5 gal Poly Pail (activator not included)	Blue	021200 87965 4
	50 gal* (activator not included)	Blue	021200 87966 1

*Open Head Drum

3M™ Scotch-Grip™ Rubber and Gasket Adhesive 847

- Premium quality, multi-purpose adhesive.
- Develops strong, flexible bonds very rapidly to a wide variety of substrates.
- Resistance to most fuels and oil.
- Scotch-Grip 847L adhesive is a low viscosity grade adhesive for many spray or brush applications.



7234

PRODUCT	SIZE	COLOR	UPC
847	1 qt	Reddish-Brown	021200 19721 5
	5 gal	Reddish-Brown	021200 65179 3
	1 qt	Brown	021200 22573 4
847L	5 gal Pail	Brown	021200 22575 8
	54 gal*	Brown	021200 22576 5

* Closed Head Drum

NOTE: 3M™ Scotch-Grip™ Rubber and Gasket Adhesive 847 is identical to 3M™ Scotch-Grip™ Rubber and Gasket Adhesive EC-847 in chemical composition. Scotch-Grip EC-847 adhesive has been labeled, packaged, tested and certified for aircraft and aerospace applications.

Rubber and Gasket/Contact Adhesives

3M™ Scotch-Grip™ Vinyl Adhesive 1099

- Fast drying, resistance to plasticizer migration for bonding vinyl extrusions and sheeting.
- High strength and resistance to weathering, water, oil and many solvents.
- Scotch-Grip 1099L adhesive is a low viscosity grade for spray applications.

PRODUCT	SIZE	COLOR	UPC
1099	1 qt	Tan	021200 19811 3
1099L	5 gal Pail/Pour Spout	Tan	021200 22578 9
	55 gal (54) Agit Drum	Tan	021200 22579 6

NOTE: 3M™ Scotch-Grip™ Vinyl Adhesive 1099 is identical to 3M™ Scotch-Grip™ Vinyl Adhesive EC-1099 in chemical composition. Scotch-Grip EC-1099 adhesive has been labeled, packaged, tested and certified for aircraft and aerospace applications.

3M™ Scotch-Grip™ Rubber And Gasket Adhesive 1300

- Bonds neoprene, SBR, butyl and other types of rubber to various substrates.
- Temperature performance range is -30° to 300°F (-34° to 149°C).
- Scotch-Grip 1300L adhesive is a lower solids viscosity version of Scotch-Grip 1300 adhesive for easier brushing and sprayability.



55683

PRODUCT	SIZE	COLOR	UPC
1300	5 oz Tube	Yellow	021200 19868 7
EC-1300	1 qt	Yellow	021200 19928 8
	1 qt	Yellow	021200 19927 1
1300L	1 gal	Yellow	021200 19931 8
	5 gal Pail/Pour Spout	Yellow	021200 19936 3

NOTE: 3M™ Scotch-Grip™ Rubber and Gasket Adhesive 1300 is identical to 3M™ Scotch-Grip™ Rubber and Gasket Adhesive EC-1300 in chemical composition. Scotch-Grip EC-1300 adhesive has been labeled, packaged, tested and certified for aircraft and aerospace applications.

3M™ Scotch-Grip™ High Performance Contact Adhesive 1357

- High performance contact adhesive that provides a long bonding range and excellent initial strength.
- Long bonding range.
- Excellent initial strength.
- High heat resistance.



179544

PRODUCT	SIZE	COLOR	UPC
1357	1 pt	Gray/Olive	021200 19891 5
	1 qt	Gray/Olive	021200 19893 9
	5 gal Pail/Pour Spout	Gray/Olive	021200 19897 7
	5 gal	Neutral	021200 64963 9
1357L	55 gal*	Gray/Olive	021200 19898 4
	5 gal	—	021200 22590 1
	55 gal*	—	021200 22591 8
	5 gal	—	021200 22591 8

*Closed Head Agit Drum

NOTE: 3M™ Scotch-Grip™ High Performance Contact Adhesive 1357 is identical to 3M™ Scotch-Grip™ High Performance Contact Adhesive EC-1357 in chemical composition. 3M™ Scotch-Grip™ EC-1357 adhesive has been labeled, packaged, tested and certified for aircraft and aerospace applications.

3M™ Scotch-Grip™ Rubber and Gasket Adhesive 2141

- A light colored, high strength adhesive with a long tack range.
- Excellent water, oil, and grease resistance.



199836

PRODUCT	SIZE	COLOR	UPC
2141	1 qt	Light Yellow	021200 96742 9
	1 gal	Light Yellow	021200 65374 2
	5 gal	Light Yellow	021200 20245 2

NOTE: 3M™ Scotch-Grip™ High Performance Contact Adhesive 2141 is identical to 3M™ Scotch-Grip™ High Performance Contact Adhesive EC-2141 in chemical composition. 3M™ Scotch-Grip™ EC-2141 adhesive has been labeled, packaged, tested, and certified for aircraft and aerospace applications.

3M™ Scotch-Grip™ Rubber Based Adhesive EC-4419

- Fire resistant, synthetic, rubber-based adhesive.
- Used for bonding gaskets in aircraft interiors and for attachment of de-icing boots.
- Quick dry time.
- Can be applied by brush or flow gun.
- Controlled flow.
- Even spreadability when brushed applied.

PRODUCT	SIZE	COLOR	UPC
EC-4419	5 gal	Yellow	021200 82568 2

Aerosol Adhesives

3M™ Repositionable Spray Adhesive 75

- Provides tape-like bonds on many lightweight materials.
- Adheres in seconds, yet has an extra-long tack range that allows for lifting and repositioning materials.



196898

PRODUCT	SIZE	COLOR	UPC
75	16 oz Aerosol Can	Clear	021200 30067 7

3M™ Rubber And Vinyl Adhesive 80

- First true contact adhesive in aerosol form.
- Resistance to plasticizing oils.
- Bonds rubber and supported vinyls better than many typical bulk neoprene contact adhesives.



326476

PRODUCT	SIZE	UPC
80	24 oz Aerosol Can	021200 82618 4

3M™ Hi-Tack Spray Adhesive 76

- Quick-tacking, fast strength buildup.
- Bonding hard to hold materials like polyethylene and polypropylene.



171584

PRODUCT	SIZE	COLOR	UPC
76	24 oz Aerosol Can	Clear	021200 30026 4
Original Formula*	24 oz Aerosol Can	Clear	021200 96317 9

*Not For Sale in California.

3M™ Hi-Strength 90 Spray Adhesive

- High strength, fast contact-type adhesive.
- Fast contact strength buildup for many decorative laminates.
- Only needs one minute of drying time.



171585

PRODUCT	SIZE	UPC
90	24 oz Aerosol Can	021200 30023 3

3M™ Super 77 Spray Adhesive

- High tack, high coverage, and fast drying for permanently attaching a variety of materials.
- Bonds quickly in 15 seconds.
- Securely bonds many lightweight materials.

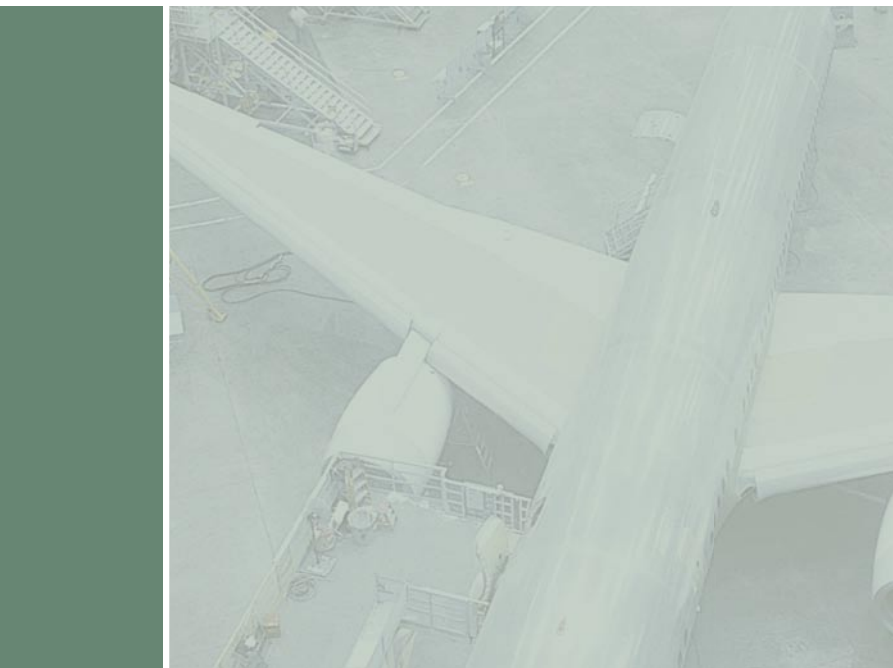


326484

PRODUCT	SIZE	UPC
Super 77	10 oz Aerosol Can	021200 76098 3
	24 oz Aerosol Can	021200 21210 9
Clear Original Formula*	24 oz Aerosol Can	021200 96315 5

*Not for sale in California.

Surface Protection Solutions



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POLYURETHANE PROTECTIVE TAPES

3M™ Polyurethane Protective Tape is 100% solids and contains no hazardous air pollutants (HAPs), volatile organic components (VOCs) or materials restricted by regulations or laws. Respiratory protection is not required under normal use conditions. 3M polyurethane protective tape meets US Federal and California regulations for landfillable materials. The product is potentially recyclable.

General Use

3M™ Polyurethane Protective Tape 8544

- Applications include fuel cell bladder protection.

PRODUCT	SIZE	TOTAL THICKNESS	COLOR	UPC/NSN
8544	1 in x 36 yds	0.009 in (0.23mm)	Glossy Black	021200 24330 1 7510-01-323-8195
	2 in x 36 yds	0.009 in (0.23mm)	Glossy Black	021200 83897 2 7510-01-323-8196
	Custom Sizes	0.009 in (0.23mm)	Glossy Black	N/A

3M™ Polyurethane Protective Tape 8547

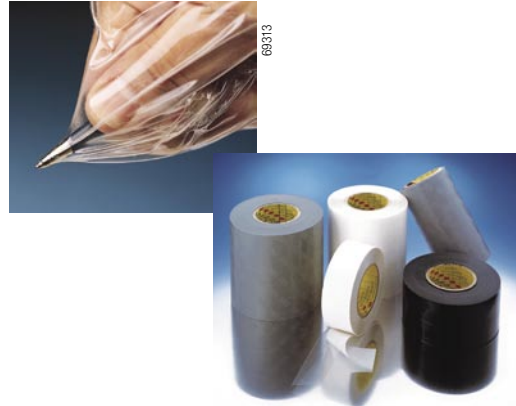
- Rugged, removable (low tack), flame resistant polyurethane tape.
- Transparent for temporarily covering lenses and windows.
- Meets NFPA 701-1989 Ed.
- Applications include temporary protection from spark and weld spatter and temporary composite part protection.

PRODUCT	SIZE	TOTAL THICKNESS	COLOR	UPC
8547	Custom Sizes	0.013 in (0.33mm)	Transparent	N/A

3M™ Polyurethane Protective Tape 8560

- Indoor grade, polyurethane tape with natural rubber adhesive.

PRODUCT	SIZE	TOTAL THICKNESS	COLOR	UPC
8560	1 in x 36 yds	0.014 in (0.36mm)	Glossy Transparent	021200 83898 9
	2 in x 36 yds	0.014 in (0.36mm)	Glossy Transparent	021200 83899 6
	3 in x 36 yds	0.014 in (0.36mm)	Glossy Transparent	021200 83900 9
	4 in x 36 yds	0.014 in (0.36mm)	Glossy Transparent	021200 83901 6
	4 ³ / ₈ in x 36 yds	0.014 in (0.36mm)	Glossy Transparent	021200 41884 6
	Custom Sizes	0.014 in (0.36mm)	Glossy Transparent	N/A



3M™ Polyurethane Protective Tape 8561

- Indoor grade polyurethane tape with acrylic adhesive.
- Applications include anti-chafe and grit blast protection.

PRODUCT	SIZE	TOTAL THICKNESS	COLOR	UPC
8561	1 in x 36 yds	0.14 in (0.36mm)	Glossy Transparent	021200 83902 3
	2 in x 36 yds	0.14 in (0.36mm)	Glossy Transparent	021200 83903 0
	3 in x 36 yds	0.14 in (0.36mm)	Glossy Transparent	021200 83904 7
	4 in x 36 yds	0.14 in (0.36mm)	Glossy Transparent	021200 83905 4
	5 in x 36 yds	0.14 in (0.36mm)	Glossy Transparent	021200 39344 0
	6 in x 36 yds	0.14 in (0.36mm)	Glossy Transparent	021200 83906 1
	12 in x 36 yds	0.14 in (0.36mm)	Glossy Transparent	021200 39345 7
	Custom Sizes	0.14 in (0.36mm)	Glossy Transparent	N/A

3M™ Polyurethane Protective Tape 8562

- Indoor grade, polyurethane tape with acrylic adhesive.
- Applications include anti-chafe and grit blast protection.

PRODUCT	SIZE	TOTAL THICKNESS	COLOR	UPC
8562	1 in x 36 yds	0.008 in (0.20mm)	Glossy Transparent	021200 83907 8
	2 in x 36 yds	0.008 in (0.20mm)	Glossy Transparent	021200 83908 5
	Custom Sizes	0.008 in (0.20mm)	Glossy Transparent	N/A

POLYURETHANE PROTECTIVE TAPES

General Use

3M™ Polyurethane Protective Tape 8607

- Rugged, outdoor grade polyurethane tape with acrylic adhesive.
- Used for aircraft and windmill leading edge protection.
- Splice free.
- Applications include paint, plastic, and metal protection.

PRODUCT	SIZE	TOTAL THICKNESS	COLOR/LINER	UPC
8607	6 in x 36 yds	0.014 in (0.36mm)	Transparent, Poly Liner	021200 96348 3
	10 in x 36 yds	0.014 in (0.36mm)	Transparent, Poly Liner	021200 96645 3
	Custom Sizes	0.014 in (0.36mm)	Transparent, Poly Liner	N/A
8607R	4 in x 36 yds	0.014 in (0.36mm)	Transparent, Paper Liner	021200 74152 4
	6 in x 36 yds	0.014 in (0.36mm)	Transparent, Paper Liner	021200 74153 1
	240mm x 33m	0.014 in (0.36mm)	Transparent, Paper Liner	048011 53239 4
	152mm x 100m	0.014 in (0.36mm)	Transparent, Paper Liner	021200 74228 6

3M™ Polyurethane Protective Tape 8671

- General purpose, outdoor grade, polyurethane tape with high shear acrylic adhesive.
- Used for aircraft and windmill leading edge protection.
- Applications include paint, plastic, and metal protection.

PRODUCT	SIZE	TOTAL THICKNESS	COLOR	UPC
8671	1 in x 36 yds	0.014 in (0.36mm)	Transparent	021200 24342 4
	2 in x 36 yds	0.014 in (0.36mm)	Transparent	021200 24343 1
	3 in x 36 yds	0.014 in (0.36mm)	Transparent	021200 24344 8
	4 in x 36 yds	0.014 in (0.36mm)	Transparent	021200 39346 4
	6 in x 36 yds	0.014 in (0.36mm)	Transparent	021200 67201 9
	12 in x 36 yds	0.014 in (0.36mm)	Transparent	021200 67202 6
	Custom Sizes	0.014 in (0.36mm)	Transparent or Glossy White	N/A
8671HS	1 in x 36 yds	0.014 in (0.36mm)	Transparent	021200 24345 5
	2 in x 36 yds	0.014 in (0.36mm)	Transparent	021200 41414 5
	4 in x 36 yds	0.014 in (0.36mm)	Transparent	021200 40944 8
	6 in x 36 yds	0.014 in (0.36mm)	Transparent	021200 64678 2
	12 in x 36 yds	0.014 in (0.36mm)	Transparent	021200 64679 9
8671P	20 in x 36 yds	0.014 in (0.36mm)	Transparent	021200 41413 8
	Custom Sizes	0.014 in (0.36mm)	Transparent	N/A
	4 in x 36 yds	0.014 in (0.36mm)	Transparent	021200 41891 4
	36 in x 36 yds	0.014 in (0.36mm)	Transparent	021200 41892 1
	Custom Sizes	0.014 in (0.36mm)	Transparent	N/A

3M™ Polyurethane Protective Tape 8616

- Outdoor grade protective backing with high-tack plasticizer compatible acrylic adhesive.
- Recommended as a quick repair patch and can be used on wet or dry surfaces.
- Bonds to powder-coated paint.
- Applications include joining, sealing, and repairing of vinyl materials.

PRODUCT	SIZE	TOTAL THICKNESS	COLOR	UPC
8616	Custom Sizes	0.016 in (0.40mm)	Matte Transparent	N/A

3M™ Polyurethane Protective Tape 8617

- Indoor grade, polyurethane backing with high tack, quick grab rubber-based adhesive.
- Recommended as a quick repair patch and can be used on wet or dry surfaces.
- Applications include joining and sealing of canvas, rubber, leather, plastic, and fabric.

PRODUCT	SIZE	TOTAL THICKNESS	COLOR	UPC
8617	Custom Sizes	0.016 in (0.40mm)	Matte Transparent	N/A

3M™ Polyurethane Protective Tape 8672

- General purpose, outdoor grade polyurethane tape with acrylic adhesive.
- Applications include paint, plastic, and metal protection.

PRODUCT	SIZE	TOTAL THICKNESS	COLOR	UPC
8672	6 in x 18 yds	0.008 in (0.20mm)	Transparent	021200 65770 2
	1 in x 36 yds	0.008 in (0.20mm)	Transparent	021200 24346 2
	2 in x 36 yds	0.008 in (0.20mm)	Transparent	021200 39347 1
	3 in x 36 yds	0.008 in (0.20mm)	Transparent	021200 40956 1
	4 in x 36 yds	0.008 in (0.20mm)	Transparent	021200 30753 9
	6 in x 36 yds	0.008 in (0.20mm)	Transparent	021200 67670 3
	12 in x 36 yds	0.008 in (0.20mm)	Transparent	021200 67671 0
	Custom Sizes	0.008 in (0.20mm)	Transparent	N/A
	6 in x 18 yds	0.008 in (0.20mm)	Glossy Black	021200 24897 9
	Custom Sizes	0.008 in (0.20mm)	Glossy Black	N/A

Corrosion and Moisture Protection

3M™ Surface Protection Film 3952

- Fluoropolymer film that provides high performance, low surface energy coating solution for both interior and exterior applications.
- Resistant to moisture, chemicals, and environmental agents.
- Meets FAR 25.853 for aircraft interiors.
- Color stable in extreme UV environment.
- Typically used for composite co-cure applications.

PRODUCT	SIZE	TOTAL THICKNESS	COLOR	UPC
3952	12 in x 72 yds	3.5 mils	46320	021200 56519 9
	Custom Sizes	3.5 mils	46320	N/A

3M™ Paint Replacement Tape 5004

- Fluoropolymer film with acrylic adhesive that provides high performance, low surface energy coating solution for both interior and exterior applications.
- Resistant to moisture, chemicals, and environmental agents offering excellent substrate protection as well as long-term color stability.
- Meets FAR 25.853 for aircraft interiors.
- Used in general aviation, commercial, and military aircraft applications.



PRODUCT	SIZE	TOTAL THICKNESS	COLOR	UPC
5004	Custom Sizes	5.5 mils	36375	021200 41882 2

3M™ Polyurethane Protective Tape 8663DL

- Outdoor grade polyurethane tape with acrylic adhesive.
- Dual liner (DL) facilitates easy installation.
- Striped to indicate second liner is attached.
- Typically used for a fluid/corrosion barrier on aircraft flooring.



PRODUCT	SIZE	TOTAL THICKNESS	COLOR	UPC
8663DL	4 in x 36 yds	0.018 in (0.46mm)	Transparent	021200 24904 4
	36 in x 36 yds	0.018 in (0.46mm)	Transparent	021200 24903 7
	Custom Size: 24 in x 36 yds	0.018 in (0.46mm)	Transparent	70-0000-8412-2
	Custom Sizes	0.018 in (0.46mm)	Transparent	N/A

3M™ Polyurethane Protective Tape 8693DL

- Flame-retardant tape construction made from a tough polyurethane elastomer that resists puncture, tearing and abrasion.
- Supplied with a striped top polyester liner used as an aide for wide web applications.
- Meets FAR 25.853 for aircraft interiors.
- Applied over aircraft floor panels, this product establishes an excellent barrier to fluids and helps prevent liquids from causing corrosion of the floor system.

PRODUCT	SIZE	TOTAL THICKNESS	COLOR	UPC
8693DL	24 in x 36 yds	0.018 in (0.46mm)	Transparent	021200 49972 2

3M™ Polyurethane Protective Tape 8694

- Flame-retardant polyurethane protective tape.
- Lightweight and puncture resistant.
- Meets FAR 25.853 for aircraft interiors.
- Applications include aircraft interiors, insulation patching, cargo compartments, and as a fluid/corrosion barrier on aircraft flooring.

PRODUCT	SIZE	TOTAL THICKNESS	COLOR	UPC
8694	4 in x 36 yds	0.09 in (0.23mm)	Transparent	021200 49974 6
	Custom Sizes	0.09 in (0.23mm)	Transparent	021200 49186 3

Impact Protection

3M™ Polyurethane Protective Tape 8547

- Rugged, removable (low tack), flame-resistant polyurethane tape.
- Transparent for covering lenses and windows.
- Meets NFPA 701-1989 Ed.
- Applications include temporary protection from spark and weld spatter and temporary composite part protection.

PRODUCT	SIZE	TOTAL THICKNESS	COLOR	UPC
8547	Custom Sizes	0.013 in (0.33mm)	Transparent	N/A

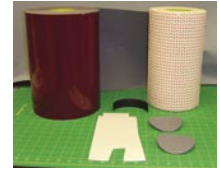
3M™ Polyurethane Protective Tape 8560

- Indoor grade polyurethane tape with natural rubber adhesive.
- Temporary anti-chafe protection.

PRODUCT	SIZE	TOTAL THICKNESS	COLOR	UPC
8560	1 in x 36 yds	0.014 in (0.36mm)	Glossy Transparent	021200 83898 9
	2 in x 36 yds	0.014 in (0.36mm)	Glossy Transparent	021200 83899 6
	3 in x 36 yds	0.014 in (0.36mm)	Glossy Transparent	021200 83900 9
	4 in x 36 yds	0.014 in (0.36mm)	Glossy Transparent	021200 83901 6
	4 ³ / ₈ in x 36 yds	0.014 in (0.36mm)	Glossy Transparent	021200 41884 6
	Custom Sizes	0.014 in (0.36mm)	Glossy Transparent	N/A

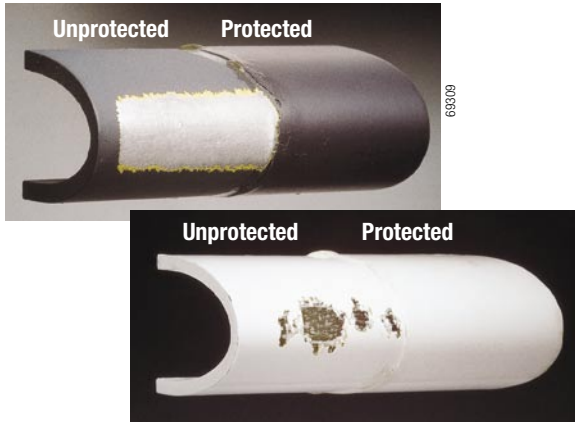
3M™ Polyurethane Protective Tape 8641

- Extremely impact-resistant outdoor grade polyurethane protective tape with acrylic foam adhesive.
- Applications include protection of aircraft skins and panels from foreign object damage (FOD).
- Can be perforated for application on pressurized fuselage panels.



PRODUCT	SIZE	TOTAL THICKNESS	DESCRIPTION	UPC	
8641, Gray 36118	1 in x 36 yds	0.041 in (1.04mm)		021200 24333 2	
	12 in x 36 yds	0.041 in (1.04mm)	Perforated	021200 26859 5	
	24 in x 2 yds	0.041 in (1.04mm)		021200 24209 0	
	24 in x 36 yds	0.041 in (1.04mm)	Perforated	021200 86198 7	
	24 in x 36 yds	0.041 in (1.04mm)	Non Skip-Slit	021200 86212 0	
	Custom Sizes	0.041 in (1.04mm)	Non-Perforated, Non Skip-Slit	048011 53246 2	
	Custom Sizes	0.041 in (1.04mm)	Perforated	N/A	
	Custom Sizes	0.041 in (1.04mm)	Non-Perforated, Skip Slit Liner	N/A	
	8641, Gray 36173	Custom Sizes	0.041 in (1.04mm)	Perforated	N/A
		Custom Sizes	0.041 in (1.04mm)	Non-Perforated	N/A
12 in x 36 yds		0.041 in (1.04mm)	Perforated	021200 26857 1	
8641, Matte Black	24 in x 36 yds	0.041 in (1.04mm)	Perforated	021200 26858 8	
	Custom Sizes	0.041 in (1.04mm)	Non-Perforated, Non Skip-Slit	021200 94490 1	
	Custom Sizes	0.041 in (1.04mm)	Perforated	N/A	
8641, White	24 in x 36 yds	0.041 in (1.04mm)		021200 38370 0	
	24 in x 36 yds	0.041 in (1.04mm)	Perforated	021200 38371 7	
	Custom Sizes	0.041 in (1.04mm)	Non-Perforated	N/A	
	Custom Sizes	0.041 in (1.04mm)	Perforated	N/A	
8641-RAF, Green	24 in x 36 yds	0.041 in (1.04mm)	Non-Perforated	021200 41408 4	
	24 in x 36 yds	0.041 in (1.04mm)	Perforated	021200 41409 1	
	Custom Sizes	0.041 in (1.04mm)	Non-Perforated	N/A	
	Custom Sizes	0.041 in (1.04mm)	Perforated	N/A	

Erosion Protection



3M™ Polyurethane Protective Tape 8542HS MB

- Outdoor grade polyurethane tape with high shear (HS) acrylic adhesive.
- Used for protecting helicopter rotor blades from rain and sand erosion.

PRODUCT	SIZE	TOTAL THICKNESS	COLOR	UPC
8542-1	.75 in x 36 yds	0.022 in (0.56mm)	Matte Black	021200 96252 3
8542-2	1 1/4 in x 36 yds	0.022 in (0.56mm)	Matte Black	021200 96253 0
8542HS	Custom Sizes	0.022 in (0.56mm)	Matte Black	N/A

3M™ Polyurethane Protective Tape 8545

- Military grade polyurethane tape.
- No adhesive; use two-part epoxy for bonding.
- Applications include advanced rotor blade protection on military helicopters.

PRODUCT	SIZE	TOTAL THICKNESS	COLOR	UPC
8545	Custom Sizes	0.040 in (1.016mm)	Matte Black	N/A

3M™ Polyurethane Protective Tape 8673

- Transparent, glossy polyurethane tape with acrylic adhesive.
- Extremely UV stable.
- Scratch, erosion, puncture, and impact protection.

PRODUCT	SIZE	TOTAL THICKNESS	COLOR	UPC
8673	Custom Sizes	0.014 in (0.36mm)	Transparent	70-0000-8321-5

3M™ Polyurethane Protective Tape 8663

- Rugged polyurethane tape with high shear acrylic adhesive.
- Regular shear adhesive also available (8663).
- Applications include helicopter rotor blade protection and aircraft leading edge structure protection.



PRODUCT	SIZE	TOTAL THICKNESS	COLOR	UPC
8663HS	1 in x 36 yds	0.018 in (0.46mm)	Matte Black	021200 24338 7
	4 in x 36 yds	0.018 in (0.46mm)	Matte Black	021200 24340 0
	4 in x 3 yds	0.018 in (0.46mm)	Transparent	021200 25201 3
	Custom Sizes	0.018 in (0.46mm)	Transparent	048011 56801 0
8663	1 in x 36 yds	0.018 in (0.46mm)	Transparent	021200 24335 6
	4 in x 36 yds	0.018 in (0.46mm)	Transparent Skip Slit	021200 24337 0
		0.018 in (0.46mm)	Transparent Non Skip Slit	021200 30301 2
	12 in x 36 yds	0.018 in (0.46mm)	Transparent	021200 45276 5
	36 in x 36 yds	0.018 in (0.46mm)	Transparent	021200 30302 9
	1 in x 36 yds	0.018 in (0.46mm)	Matte Black	021200 24334 9
Custom Sizes	0.018 in (0.46mm)	Matte Black	N/A	

3M™ Polyurethane Protective Tape 8667HS

- Polyurethane tape with high shear acrylic adhesive.
- Scratch, erosion, puncture, and impact protection
- Used for protecting helicopter rotor blades and aircraft leading edges from sand and rain erosion.

PRODUCT	SIZE	TOTAL THICKNESS	COLOR/ DESCRIPTION	UPC
8667HS	5 in x 36 yds	0.28 in (0.71mm)	Matte Black Non-Skip Slit	048011 56725 9
	6 in x 36 yds	0.28 in (0.71mm)	Transparent	048011 53379 7
	24 in x 36 yds	0.28 in (0.71mm)	36173	021200 49981 4
	Custom Sizes	0.28 in (0.71mm)	36173	N/A
0.28 in (0.71mm)		Matte Black Skip Slit	N/A	

POLYURETHANE PROTECTIVE TAPES

Erosion Protection

3M™ Polyurethane Protective Tape 8674

- Transparent, glossy, polyurethane tape with acrylic adhesive.
- Extremely UV stable.
- Dual liner (DL) for ease of converting.
- Best clarity of 3M polyurethane protective tapes.

PRODUCT	SIZE	TOTAL THICKNESS	COLOR	UPC
8674	Custom Sizes	0.008 in (0.20mm)	Transparent	N/A
8674DL	Custom Sizes	0.008 in (0.20mm)	Transparent	N/A

3M™ Polyurethane Protective Tape 8681HS

- Outdoor grade polyurethane tape with high shear (HS) acrylic adhesive.
- Matte surface finish.
- Applications include supersonic (F-16) aircraft and rotor blade leading edge protection.

PRODUCT	SIZE	TOTAL THICKNESS	DESCRIPTION	UPC	
8681HS, Gray 36118	2 in x 36 yds	0.014 in (0.36mm)	Non-Skip Slit	021200 24473 5	
		0.014 in (0.36mm)		021200 83852 1	
	2 3/8 in x 36 yds	0.014 in (0.36mm)		021200 83896 5	
		0.014 in (0.36mm)		021200 24472 8	
	3 in x 36 yds	0.014 in (0.36mm)	Skip Slit	021200 24471 1	
	4 in x 3 yds	0.014 in (0.36mm)	Non-Skip Slit	021200 25206 8	
	4 in x 36 yds	0.014 in (0.36mm)	Skip Slit	021200 38167 6	
	6 in x 36 yds	0.014 in (0.36mm)	Skip Slit	021200 64684 3	
	Custom Sizes	0.014 in (0.36mm)	Non-Skip Slit	N/A	
		0.014 in (0.36mm)	Skip Slit	N/A	
	8681HS, Gray 36173	Custom Sizes	0.014 in (0.36mm)	Non-Skip Slit	N/A
			0.014 in (0.36mm)	Skip Slit	N/A
8681HS, Gray 36251	1 1/2 in x 36 yds	0.014 in (0.36mm)	Non-Skip Slit	021200 26759 8	
	2 in x 36 yds	0.014 in (0.36mm)	Non-Skip Slit	021200 24470 4	
	2 3/8 in x 36 yds	0.014 in (0.36mm)		021200 24469 8	
	3 in x 36 yds	0.014 in (0.36mm)	Skip Slit	021200 24468 1	
	24 in x 72 yds	0.014 in (0.36mm)		021200 26758 1	
		0.014 in (0.36mm)		021200 37700 6	
		0.014 in (0.36mm)		021200 31799 6	

Continued

3M™ Polyurethane Protective Tape 8681HS *continued*

PRODUCT	SIZE	TOTAL THICKNESS	DESCRIPTION	UPC	
8681HS, Gray 36251	Custom Sizes	0.014 in (0.36mm)		N/A	
		0.014 in (0.36mm)	No-Skip Slit	N/A	
8681HS, Gray 36270	Custom Sizes	0.014 in (0.36mm)	Non-Skip Slit	N/A	
		0.014 in (0.36mm)	Skip Slit	N/A	
	8 in x 36 yds	0.014 in (0.36mm)	Skip Slit	021200 41017 8	
	2 in x 36 yds	0.014 in (0.36mm)	Non-Skip Slit	021200 24984 6	
8681HS, Gray 36320	2 3/8 in x 36 yds	0.014 in (0.36mm)		021200 24983 9	
	3 in x 36 yds	0.014 in (0.36mm)	Skip Slit	021200 24982 2	
	4 in x 36 yds	0.014 in (0.36mm)	Skip Slit	021200 24981 5	
	6 in x 36 yds	0.014 in (0.36mm)	Skip Slit	021200 64685 0	
	Custom Sizes	0.014 in (0.36mm)	Non-Skip Slit	N/A	
		0.014 in (0.36mm)	Skip Slit	N/A	
	8681HS, Gray 36493	Custom Sizes	0.014 in (0.36mm)		N/A
			0.014 in (0.36mm)		
		1 in x 36 yds	0.014 in (0.36mm)	Non-Skip Slit	021200 24348 6
		2 in x 36 yds	0.014 in (0.36mm)	Non-Skip Slit	021200 65736 8
0.014 in (0.36mm)			Non-Skip Slit	021200 24989 1	
2 3/8 in x 36 yds		0.014 in (0.36mm)		021200 83926 9	
3 in x 36 yds		0.014 in (0.36mm)	Skip Slit	021200 24988 4	
4 in x 36 yds		0.014 in (0.36mm)		021200 67996 4	
		0.014 in (0.36mm)	Skip Slit	021200 24987 7	
6 in x 36 yds		0.014 in (0.36mm)		021200 64682 9	
8681HS, Trans-parent		8 in x 36 yds	0.014 in (0.36mm)		021200 83933 7
			0.014 in (0.36mm)	Skip Slit	021200 24986 0
	12 in x 36 yds	0.014 in (0.36mm)		021200 84161 3	
		0.014 in (0.36mm)		021200 83855 2	
	Custom Sizes	0.014 in (0.36mm)		021200 83930 6	
		0.014 in (0.36mm)	Skip Slit	021200 24985 3	
	Custom Sizes	0.014 in (0.36mm)		N/A	
		0.014 in (0.36mm)	Non-Skip Slit	N/A	
	Custom Sizes	0.014 in (0.36mm)	Skip Slit	N/A	

PROTECTIVE BOOTS

3M™ Polyurethane Protective Boots are made of very tough thermoplastic polyurethane elastomer with acrylic adhesive pre-formed to fit many industrial and common aircraft applications (including radomes, wing tips, landing gear pods, prop spinners, etc.). They provide protection against damage caused by moisture, UV light, wind, sand, rain, sleet, snow, and other airborne particles.

- Provides protection against damage caused by moisture, UV light, wind, sand, rain, sleet, snow, and other airborne particles.
- Very tough thermoplastic polyurethane elastomer with acrylic adhesive pre-formed to fit.
- Abrasion, erosion, scratch, puncture, moisture, and impact resistant.
- Contains no VOCs.
- Fast and easy to apply.
- Over 530 formed shapes available.

Commercial Aircraft

AIRCRAFT TYPE	APPLICATION	BOOT NO.	COLOR	UPC	QTY./CASE
Commercial Aircraft					
Boeing 707, Boeing 727 and Boeing 737	Boeing 707, 727 and 737 radomes	SJ8665 FP1-1	Transparent	021200 67612 3	1
				021200 15730 1	5
Boeing 757	Boeing 757 radomes	SJ8665 FP33-1	Transparent	021200 63103 0	1
				021200 63104 7	5
Boeing 767	Boeing 767 radomes	SJ8665 FP15-1	Transparent	021200 67615 4	1
				021200 17235 9	5
Boeing MD80/MD90	Boeing MD80/MD90 Landing Gear Boot	SJ8667HS FP502	Transparent	048011 53277 6	8
Canadair	Canadair Challenger RJ, 600 and 601 radomes	SJ8665 FP22	Transparent	021200 17709 5	1
				021200 17981 5	5
				021200 30750 8	1
	Canadair RJ PN6017790-4	SJ8665 FP121	Transparent	021200 30749 2	5
Embraer	Embraer EMB 120 radomes	SJ8665 FP47	Transparent	021200 67295 8	1
				021200 67296 5	5
McDonnell Douglas	Douglas DC-9, MD-80 radomes	SJ8665 FP3	Transparent	021200 16487 3	1
				021200 67613 0	5



Business Jet/Regional Jet

AIRCRAFT TYPE	APPLICATION	BOOT NO.	COLOR	UPC	QTY./CASE
Commercial Aircraft					
Bombardier	CRJ 100 and 200 radome	SJ8665 FP22	Transparent	021200 17981 5	1
				021200 17709 5	5
Embraer	EMB-120 and EMB-145 radomes	SJ8665 FP47	Transparent	021200 67295 8	1
				021200 67296 5	5
Gulfstream	Gulfstream G3 and G4 radomes	SJ8665 FP21	Transparent	021200 19000 1	1
				021200 18671 4	5
Learjet	Learjet 23, 24, 25, 28, 29, 31, 35, 36 radomes	SJ8665 FP507-1	Transparent	021200 26599 0	1
				Learjet 50 radomes	SJ8665 FP514-1
	Learjet M-45 radome	SJ8665 FP174	Transparent	021200 23953 3	1
				021200 23954 0	5

PROTECTIVE BOOTS

Private Aircraft

AIRCRAFT TYPE	APPLICATION	BOOT NO.	COLOR	UPC	QTY./CASE
Private Aircraft					
Beechcraft	Beech Baron with Norton Honeycomb radomes	SJ8665 FP55	Transparent	021200 67694 9	1
				021200 67693 2	5
	Beechcraft — 90, 100, 200, Most King Air, Queen Air Models, 65/A65, 70, 80, A80 radomes	SJ8665 FP5	Transparent	021200 17232 8	1
				021200 17232 8	5
Cessna	Cessna Citation I, II, IV and V radomes	SJ8665 FP29	Transparent	021200 19019 3	1
				021200 19001 8	5
	Cessna 208 (Wing Mount) radomes	SJ8665 FP34	Transparent	021200 62818 4	1
				021200 62819 1	5
Hawker Siddeley	Hawker Siddeley 125, 600, 700 and 800 series radomes, most pointed nose	SJ8665 FP9	Transparent	021200 16948 9	1
				021200 16948 9	5

*Many more boots available.

Military Aircraft

AIRCRAFT TYPE	APPLICATION	BOOT NO.	COLOR	UPC	QTY./CASE
Military Aircraft					
AN/ALQ	AN/ALQ-184 Assembly Radome Cover	SJ8663HS FP308A	Matte Black	021200 41061 1	1
				021200 41060 4	5
	AN/ALQ-184 Assembly Radome 4 inch Ear Cap	SJ8663HS FP308B	Matte Black	021200 41059 8	1
				021200 41058 1	5
BAe	BAe RFCM Rain Erosion Boot	SJ8681HS FP525	26493	048011 56791 4	5
Boeing C-17	Boeing C-17 Landing Gear Boot	SJ8641 FP435	36173	021200 56584 7	1
				021200 56585 4	5
	Boeing C-17 Landing Gear Boot	SJ8641 FP481	36173	021200 96133 5	1
				021200 96132 8	5
				021200 83856 9	1
F-15	Counter Measure, Wing Tip Pod	SJ8665 FP78	Transparent	021200 67974 2	5
				021200 67975 9	25
	Metric Systems S-band Antenna Radome — Button Cluster	SJ8681HS FP394	Transparent	021200 49035 4	1
				021200 49036 1	5
F-16	F-16 Center Line Tank (Light Gray)	SJ8667HS FP77	Light Gray	021200 96460 2	1
				021200 96459 6	5
	F-16 External (Wing Mount) Fuel Tanks	SJ8667HS FP60	Transparent	021200 84108 8	1
				021200 84109 5	5
	LAU 129 Launcher Rails PN700192-1&2	SJ8667HS FP144	Transparent	021200 87598 4	5
				021200 87597 7	10
	Pod	SJ8665 FP100	Transparent	021200 84229 0	5
	AMD Pod	SJ8667HS FP108	36320	021200 84200 9	1
F-18	F-18 External Tanks	SJ8667HS FP44	36320	021200 67191 3	1
				021200 67190 6	5
Lockheed	Lockheed P-3 Orion, Rain Erosion Cap, Nose Radome (PN 428151)	SJ8665 FP178	Transparent	021200 23961 8	1
				021200 23960 1	5
T-38/F-5	T-38 Nose Cone	SJ8665 FP92	Transparent	021200 83990 0	1
				021200 83991 7	5

*Many more boots available.

PROTECTIVE BOOTS — INSTALLATION

This installation procedure does not apply to 3M™ Polyurethane Protective Boots made from SJ8641. See authorizing installation documents or 3M™ Polyurethane Protective Tape 8641 technical datasheet for installation instructions.

Suggested Installation Procedures

You will need the following products:



3M™ Protective Tape Application Solution
See page 39

3M™ Vinyl Tape 471
See page 40



Step 1:

Make sure hands are clean and free of oils and grease. Clean the radome/part and the boot (top side and bottom side) with 3M™ Protective Tape Application Solution to remove the talcum powder. This will ensure maximum adhesion.

Note: Use a clean, lint-free, silicone-free cloth or cheese cloth. Do not use shop rags as they might be contaminated with silicones.



Step 2:

Trim the boot with a pair of scissors about 1/4 in. above the trim line (trim line is located 1/2 in. above the base) that is found on most boots. Make clean, smooth cuts—avoid jagged edges.

Note: To document the installation in the aircraft log books, save the boot identifier tag that is on the base of the boot.



Step 3:

Position the boot over the radome/part (adhesive/white liner side down against radome/part). Measure from the bottom of the boot and the base of the radome/part to ensure it is centered and properly positioned.



Step 4:

Use 3M™ Vinyl Tape 471 to mark three index points on the radome/part (one on the top and two on the sides approximately 90° apart) clearly establishing the center point, so the boot can be repositioned properly. Then mark three additional index points on the boot opposite of marks currently in place.

Step 5:

Remove the boot from the radome/part and turn the boot inside out taking care not to wrinkle the boot.

continued >

PROTECTIVE BOOTS — INSTALLATION



Step 6:

Spray the radome/part and boot with 3M™ Protective Tape Application Solution. Then place the boot back on the radome (liner will be facing up). Using thumb nail, lift edge of liner from the boot to expose a small portion of adhesive. Spray 3M Protective Tape Application Solution on this portion. When removing the remainder of the liner, continuously spray 3M Protective Tape Application Solution on the exposed boot.

Note: Using the radome/part as a holder for the boot is important when removing the liner. This prevents the boot from sticking to itself, making it unusable.



Step 7:

Remove the 3M™ Polyurethane Protective Boot from the radome/part, turn inside out again. The adhesive side should be facing the radome/part. Heavily spray radome/part and boot with 3M Protective Tape Application Solution, allowing for easy repositioning. The more 3M Protective Tape Application Solution used, the easier the application will be.



Step 8:

Apply the boot to the radome/part, taking care to match the index points at the top and sides of the boot. Reposition and reapply 3M Protective Tape Application Solution as needed until proper fit is achieved. Remove index marks.



Step 9:

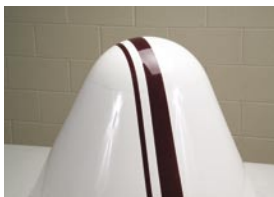
Reapply 3M Protective Tape Application Solution to the outside of the boot. Starting at the center of the radome/part, use 1–2 in. strokes with the yellow squeegee to smooth out the boot, removing the trapped 3M Protective Tape Application Solution and air bubbles.



Step 10:

Continue using short strokes, working your way down to the base. If a bubble is trapped, carefully peel boot back, reapply 3M Protective Tape Application Solution and use yellow squeegee to re-adhere. Use a clean, lint-free, silicone-free cloth to absorb the liquid at the edges of the boot. This helps the edge of the boot to stay attached to the surface of the radome/part.

Note: Small bubbles (>1/8 in.) will evaporate by themselves in less than one week. These small bubbles can be removed by using a small 1 cc syringe if necessary; however, this procedure should be kept to an absolute minimum and should not be used in the center, blunt frontal area of the boot. It is preferable to pull the boot back and reapply.



Step 11:

Dry the surface of the boot with a clean cloth. If the boot is installed on an aircraft, allow to dwell one hour at 70°F (21°C) before flight.

Repair Kits

3M™ Polyurethane Protective Tape Coating Repair Kit 8999K10

- Contains 3M™ Paint Replacement Tape and 3M™ Polyurethane Protective Tape.
- Provides tape and installation accessories to quickly and easily repair paint coatings and erosion protection in a field environment.



PRODUCT	DESCRIPTION	UPC
8999K10	Polyurethane Protective Tape Coating Repair Kit	021200 96969 0

3M™ Rotor Blade Protection Kit 8999K11

- Complete kit for field repair of erosion tape for helicopter rotor blade leading edges.



PRODUCT	DESCRIPTION	UPC
8999K11	Rotor Blade Protection Kit	048011 56703 7

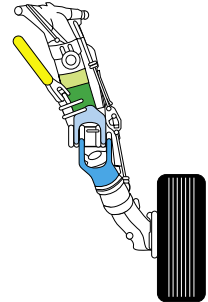
3M™ Aircraft Fuel Cell and Skin Battle Damage Repair Kit 8999K12

- Contains 3M™ Polyurethane Protective Tape and accessories.
- Kit for quickly repairing aircraft and helicopters that have sustained minor impact damage.

PRODUCT	DESCRIPTION	UPC
8999K12	Aircraft Fuel Cell and Skin Battle Damage Repair Kit	048011 56810 2

3M™ Polyurethane Protective Tape Kit 8999K1

- Uses 3M™ Polyurethane Protective Tape 8641, Gloss White.
- Kit for protecting F-18 Main Landing Gear components from corrosion, abrasion, erosion, and minor impact damage.



PRODUCT	DESCRIPTION	UPC
8999K1	F-18 Main Landing Gear Kit	021200 56588 5

Tape and Residue Removal

3M™ Tape and Residue Remover

- Non-solvent based product removes polyurethane protective tapes, tape residue and neoprene without damaging composite or metal surfaces.



PRODUCT	DESCRIPTION	UPC
	1 Gallon Can	051131 35976 5
	16 oz. Tub	051131 35975 8

PROTECTIVE TAPES — ACCESSORIES

Accessories

	DESCRIPTION	UPC/ U.S. NSN
	3M™ Scotch-Weld™ Epoxy Adhesive DP190 Gray — Duo-Pak, 1.7 fl oz A gray, flexible, two-part adhesive that cures at room temperature and provides high-strength bond with good performance in shear and peel. Used to seal edges of urethane tape and boots to prevent attack of fluids on adhesive.	021200 22647 2 1680-01-431-3607
	3M™ Scotch-Weld™ Epoxy Adhesive 2216 B/A Gray — 2 oz Tube Kit Flexible, two-part, room temperature curing epoxy with high peel and shear strength.	021200 20351 0 8040-00-145-0019
	3M™ Scotch-Weld™ Epoxy Adhesive 2216 B/A Gray — Duo-Pak, 43ml Flexible, two-part, room temperature curing epoxy with high peel and shear strength.	021200 56659 7 8040-00-145-0019
	3M™ Scotch-Weld™ EPX™ Plus II Applicator — W 2:1 and 1:1 Plunger Model 9170 Used to dispense Scotch-Weld adhesives in duo-pak cartridges. The applicator is a low-cost, portable, self-contained metering, mixing and dispensing machine that simultaneously meters and mixes two-part adhesives as the material is applied.	021200 50004 6 N/A
	3M™ Scotch-Weld™ EPX™ Applicator — Model 9740, 50ml Provides fast, easy manual dispensing of Scotch-Weld adhesives in handy duo-pak cartridges.	021200 21789 0 1680-01-431-3606
	3M™ Scotch-Weld™ EPX™ Mixing Nozzle — 9742, 50 ml Used to dispense Scotch-Weld adhesives in duo-pak cartridges.	021200 21791 3 5120-01-425-1023
	3M™ Scotch-Weld™ EPX™ Plus II Mixing Nozzle — Square, Gold Cascade meter/mix nozzle for an easy squeeze of adhesive right on target. Engineered for Scotch-Weld structural adhesives in duo-paks.	021200 50008 4 N/A
	3M™ Protective Tape Application Solution — 946.3ml Pre-mixed, water-based application solution to accurately combine the materials in the preferred ratios for the desired cleaning, ease of application and performance of 3M™ Polyurethane Protective Tape and Boots. Includes yellow squeegee and spray nozzle.	048011 56800 3 N/A

continued >

Accessories

	DESCRIPTION	UPC	U.S. NSN
	3M™ Adhesion Promoter 86A — Transparent, 7 in x 7 in packet A liquid “primer” designed to be used with 3M™ Polyurethane Protective Tape and other acrylic tapes and adhesives to enhance initial adhesion in demanding situations.	021200 96361 2	N/A
	3M™ Adhesion Promoter 86A — 1 pint can A liquid “primer” designed to be used with 3M™ Polyurethane Protective Tape and other acrylic tapes and adhesives to enhance initial adhesion in demanding situations.	021200 31592 3	8040-01-450-9187
	3M™ Edge Sealer ES2000 — Duo-Pak, 1.7 fl oz A two-part urethane sealer. It is a clear, non-yellowing, durable sealer system that provides excellent resistance to environmental exposure.	021200 96227 1	N/A
	3M™ Vinyl Tape 471 — 1 in x 36 yds Tape has a vinyl backing with a rubber adhesive. Ideal for masking curved or irregular surfaces.	Blue: 021200 07204 8 Yellow: 021200 06410 4 Red: 021200 07193 5 Green: 021200 03145 8	Blue: 7510-00-634-2943 Yellow: 7510-00-664-0473 Red: 7510-01-070-0847 Green: 7510-01-259-1400
	3M™ High Performance Cloth — 12.5 in x 14 in Provides ultra cleaning power because of its knitted, interwoven construction of water- and oil- absorbing microfibers. Excellent for the removal of: compounds, polish residues, waxes, fingerprints, dust residue, abrasive residue, solvents, splatter from welding, and grease.	Blue: 048011 23589 4 White: 048011 23649 5 Green: 048011 23650 1 Yellow: 048011 23651 8 Red: 048011 23652 5	N/A
	3M™ Tape and Residue Remover — 1 gallon Non-solvent based product removes polyurethane protective tapes, tape residue and neoprene without damaging composite or metal surfaces.	051131 35976 5	N/A
	3M™ Tape and Residue Remover — 16 oz tub Non-solvent based product removes polyurethane protective tapes, tape residue and neoprene without damaging composite or metal surfaces.	051131 35975 8	N/A

Safety Solutions



RESPIRATORS	42-47, 50-55
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RESPIRATOR APPLICATION GUIDE



3M™ Full Facepiece Respirators
6000 Series



3M™ Speedglas™ Products



3M™ Half Facepiece Respirators
6000 Series



3M™ Full Facepiece Respirators
6000 Series



3M™ Particulate
Filter 7093



3M™ Particulate
Filter 2091



3M™ Half Facepiece Respirators
6000 Series



3M™ Belt-Mounted Powered Air Purifying Respirator (PAPR)
Paint Spray Kit GVP-PSK Kit. Use 3M™ High Efficiency Cartridge GVP-440



3M™ Particulate Respirator
8210, N95



3M™ Particulate Respirator
8511, N95



DISPOSABLE



3M™ Organic Vapor Respirator Assembly
51P71, 52P71, 53P71

REUSABLE



3M™ Professional Respirator Assembly
Series R7511ES, R7512ES, R7513ES
with 3M™ Organic Vapor Cartridge 6001



3M™ Particulate Respirator
8247, R95, with Nuisance
Level Organic Vapor Relief*



3M™ Belt-Mounted Powered Air Purifying Respirator (PAPR)
Paint Spray Kit GVP-PSK Kit. Use 3M™ High Efficiency
Cartridge GVP-441



3M™ Full Facepiece Respirator
Assembly OV/P95
67P71, 68P71, 69P71



3M™ Professional Series Half
Facepiece Respirator 7500 Series with
3M™ Face Shield Kit 1631

* Nuisance level refers to concentrations not exceeding OSHA PEL/OEL or applicable exposure limits, whichever is lower.

RESPIRATOR APPLICATION GUIDE

Note: This wheel lists respirators available for various processes. Actual selection must be done by identifying the hazards and determining their concentration in the work environment.



3M™ Organic Vapor Cartridge/Particulate Filter, P95 Packout R6022



3M™ Professional Series Respirator Assembly R7511ES, R7512ES, R7513ES



3M™ Full Facepiece Respirators 6000 Series



3M™ Supplied Air Respirator Systems H-Series Hoods



3M™ Belt-Mounted Powered Air Purifying Respirator (PAPR) Paint Spray Kit GVP-PSK Kit. Use 3M™ Organic Vapor/High Efficiency Cartridge GVP-441



REUSABLE



3M™ Professional Series Half Facepiece 7500 Series



3M™ Speedglas™ Products



3M™ Full Facepiece Respirators 6000 Series



3M™ Organic Vapor/Acid Gas Cartridge 6003



3M™ Multi Gas Cartridge 6006



3M™ Particulate Welding Respirator 8515, N95



3M™ Particulate Welding Respirator 8515, N95

GRINDING AND SANDING APPLICATIONS



Workers who perform grinding, sanding and related operations should always use proper respiratory protection. In addition, they should use protection against head, face and eye injury as well as protection against hearing loss. 3M offers products that can help protect and keep workers comfortable and safe in these applications.

3M™ Particulate Respirator 8210, N95

- Lightweight construction
- Foam nose seal
- Adjustable noseclip
- Helps provide excellent worker protection

Part Number	Respirators Per Box	Boxes Per Case
8210	20	8



3M™ Particulate Respirator 8511, N95

- 3M™ Cool Flow™ Exhalation Valve for added comfort and easier exhalation in hot and humid work settings
- Lightweight construction
- Helps provide excellent worker protection
- Stapled straps
- M-noseclip

Part Number	Respirators Per Box	Boxes Per Case
8511	10	8



3M™ Particulate Respirators 9210, 9211, N95

- Collapse resistant design
- Closed cell foam nose seal
- Easy to carry and to store
- Conforms to a wide range of face sizes
- Lightweight and comfortable
- 9211 (shown) has 3M™ Cool Flow™ Exhalation Valve for added comfort and easier exhalation in hot and humid work settings

Part Number	Respirators Per Box	Boxes Per Case
9210	20	12
9211	10	12

3M™ Half Facepiece Respirator Packout 6191, 6291, 6391, P100

- Lightweight, comfortable
- Replaceable filters
- Available in 3 sizes
- Appropriate for use against asbestos
- Includes 1 pair of filters 2091, P100



The facepiece included with this packout can also be used with the filters shown below for grinding and sanding.

Part Number	Packout Description	Respirators Per Bag	Bags Per Case
6191	Small	1	24
6291	Medium	1	24
6391	Large	1	24



Particulate Filter 2071, P95



Particulate Filter 2091, P100



Particulate Filter 2097, P100*, **



Particulate Filter 7093, P100

Part Number	Filters Per Bag	Bags Per Case
2071	2	50
2091	2	50
2097	2	50
7093	4	15
7093B (Bulk)	4	36

* Provides nuisance level organic vapor relief. Nuisance level refers to concentrations not exceeding OSHA PEL or applicable government exposure levels, whichever is lower.
 ** 3M recommended for ozone protection up to 10 times the OSHA PEL. This product is not NIOSH approved for ozone protection.

3M offers a broad range of respiratory protection products. For more information, visit www.3M.com/occsafety

See page 60 for Important WARNINGS

3M™ BELT-MOUNTED PAPR SYSTEMS FOR GRINDING AND SANDING

GVP Series



Part Number	Description	Respirators Per Box	Boxes Per Case
6700DIN	Small Facepiece	1	4
6800DIN	Medium Facepiece	1	4
6900DIN	Large Facepiece	1	4

Part Number	UPC Number	Description	Packs Per Case
H-411	051138-66096	Hood Assembly with Collar and Cap Suspension Tychem® QC	1
L-501	051131-37008	Bumpcap with Wide View Faceshield	1
L-901	051138-66155	Helmet with Wide View Faceshield	1



Part Number	UPC Number	Description	Packs Per Case
GVP-122	051138-29214	Breathing Tube (for GVP-1 with H-Series Hoods)	1
GVP-123	051138-29215	Breathing Tube (for GVP-1 with 7800S Full Facepiece)	1
L-122	051131-37012	Breathing Tube (for use with L-Series Headgear)	1



3M™ GVP-Series PAPR Systems

- Can be used with several different 3M facepieces, headgear and hoods
- Provides high levels of air flow
- Allows you to select several different cartridges for different contaminants
- Lightweight components are comfortable to wear
- Includes an eight hour battery
- Intrinsically safe

3M™ Adflo™ PAPR System with 3M™ Speedglas™ ClearVisor



Adflo™ PAPR System
16-1101-40



- Provides constant airflow even as filter loads
- Uses a brushless motor that has three times the life of standard PAPR motors
- Eye*, face and respiratory protection in a single unit
- Uses an environmentally-friendly NiMH battery that fully charges in less than three hours

Part Number	Description	Packs Per Case
16-1101-40	3M™ Adflo PAPR System with 3M™ Speedglas™ ClearVisor	1

* Safety glasses must be used under all secondary eye protection devices.

For information on Positive Pressure Respirator Systems, see pages 52, 53, 54 and 55



Welding and other metal working jobs can create a variety of fumes and gases that present unique respiratory protection challenges. In addition, these applications require hearing and specialized head and eye protection. 3M provides a comprehensive line of respirators and other products that can enhance safety in most welding/metal working jobs.

3M™ Particulate Welding Respirator 8515, N95

- 3M™ Cool Flow™ Exhalation Valve for added comfort and easier exhalation in hot and humid work settings
- Comfortable, reliable and economical protection
- 3M™ Welding Web is flame resistant as demonstrated per ASTM D 2859-96
- Adjustable M-noseclip for greater comfort
- Lightweight

Part Number	Respirators Per Box	Boxes Per Case
8515	10	8

3M™ Particulate Welding Respirators 8214, 8514, N95

- 3M recommended for protection against ozone up to 10 times the OSHA PEL*
- Nuisance level organic vapor relief**
- Carbon filter media
- Wide, adjustable straps
- 3M™ Welding Web is flame resistant as demonstrated per ASTM D 2859-96
- 3M cake-resistant filter media for longer filter life
- 3M™ Cool Flow™ Exhalation Valve for added comfort and easier exhalation in hot and humid work settings
- 8214 has special faceseal

Part Number	Respirators Per Box	Boxes Per Case
8214	10	8
8514	10	8

3M™ Particulate Welding Respirators 8212, 8512, N95

- 3M cake-resistant filter media for longer filter life
- Wide, adjustable straps
- 3M™ Welding Web is flame resistant as demonstrated per ASTM D 2859-96
- 3M™ Cool Flow™ Exhalation Valve for added comfort and easier exhalation in hot and humid work settings
- 8212 has special faceseal

Part Number	Respirators Per Box	Boxes Per Case
8212	10	8
8512	10	8

3M™ Professional Series Half Facepiece Respirator 7501, 7502, 7503, P100

- 3M™ Cool Flow™ Exhalation Valve for added comfort and easier exhalation in hot and humid work settings
- Reduced heat and moisture build up
- Thin-wall design around the nose for greater comfort



Use this facepiece with the filters shown below.



Particulate Filter
2091, P100



Particulate Filter
2097, P100**, **



Particulate Filter
7093, P100

Part Number	Facepiece Description	Facepieces Per Bag	Bags Per Case
7501	Small	1	10
7502	Medium	1	10
7503	Large	1	10

Part Number	Filters Per Bag	Bags Per Case
2091	2	50
2097	2	50
7093	4	15
7093B (Bulk)	4	36

See page 60 for Important WARNINGS

* 3M recommended for ozone protection up to 10 times the OSHA PEL.
This product is not NIOSH approved for ozone protection.
** Nuisance level refers to concentrations below the current OSHA PELs.

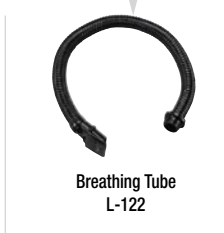
3M™ BELT-MOUNTED PAPR SYSTEMS FOR WELDING

GVP Series



Part Number	UPC Number	Description	Packs Per Case
L-503	051138-66148	Bumpcap with Welding Shield	1
L-905	051138-66156	Helmet with Welding Shield and Wide View Faceshield	1

Part Number	Description	Respirators Per Box	Boxes Per Case
7800S-S	Small Facepiece	1	1
7800S-M	Medium Facepiece	1	1
7800S-L	Large Facepiece	1	1



Breathing Tube
L-122



Breathing Tube
GVP-123

Part Number	UPC Number	Description	Packs Per Case
L-122	051131-37012	Breathing Tube (for use with L-Series headgear)	1
GVP-123	051138-29215	Breathing Tube (for GVP-1 with 7800S Full Facepiece)	1



3M™ GVP-Series PAPR Systems

- Can be used with several different 3M facepieces, headgear and hoods
- Provides high levels of air flow
- Allows you to select several different cartridges to fit the contaminant
- Lightweight components are comfortable to wear
- Includes an eight hour battery
- Intrinsically safe

3M™ Adflo™ PAPR System with 3M™ Speedglas™ Filter and Helmet



Adflo™
PAPR System



- Provides constant airflow even as filter loads
- Uses a brushless motor that has three times the life of standard PAPR motors
- Eye*, face and respiratory protection in a single unit
- Uses an environmentally-friendly NiMH battery that fully charges in less than three hours
- 3M™ Speedglas™ SideWindows optional for better peripheral vision

Contact your 3M Distributor for additional information on Speedglas Helmet and Adflo PAPR combinations. Systems are available with all 9000 and 9002 lenses and include FlexView and SideWindows options.

* Safety glasses must be used under all secondary eye protection devices.

For information on Positive Pressure Respirator Systems, see pages 52, 53, 54 and 55

3M™ SPEEDGLAS™ PRODUCTS

With the addition of the highly regarded Speedglas product line, 3M now offers an even more extensive line of safety products for grinding, sanding and welding applications. These products provide a high level of comfort and protection for people working in welding and other metal working jobs. An unmatched product line coupled with experience and integrity...that's 3M.

3M™ Speedglas™ Filter 9000F/9000XF

- Shade 5 off state and safety state
- Available in three factory-set dark shades: 10, 11 or 12
- Fixed dark shade filter provides exceptional optical clarity
- Shade 3 light state
- For rugged, long-term use
- 9000XF has an extra large filter viewing area...44% larger than most auto-darkening filters

3M™ Speedglas™ Utility Filter Shades 10, 11



- Designed for part-time welding/metal working
- Our most affordable auto-darkening filter and helmet
- For MIG and stick welding
- Two filter models: dark shade 10 or 11
- UV/IR protection is constant even when filter is OFF or in shade 3 light state

3M™ Speedglas™ Filter 9002V/9002X

- Fully adjustable delay function allows welder to add or decrease time before the filter switches from dark to light
- Sensitivity adjustment helps control interferences and multiple arc triggering issues
- User can select shades from 9 through 13
- The membrane-covered control buttons allow the user to easily change settings with gloves on
- Membrane covered controls seal the filter from dirt for longer life
- User can choose many different control combinations for personal comfort
- 9002X has an extra large filter for a better view of the work area

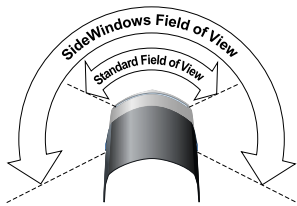
See page 60 for Important WARNINGS

3M™ Adflo™ PAPR System with 3M™ Speedglas™ Filter and Helmet

- Provides eye, face and respiratory protection in a single unit
- The OV/SD/CL/HC cartridge can be stacked onto a HEPA particle filter for added protection. You don't have to change both filters at the same time
- The Adflo system has a slim profile to fit into tight places
- No external batteries, no battery cables
- Uses a brushless motor that provides three times the life of standard PAPR motors
- Constant airflow even as filter loads
- Audible and visual alarms signal low battery charge and low airflow rate



Unique Features (See Selection Chart for Availability)



3M™ Speedglas™ Helmet with SideWindow Filters

Now welders can get much better peripheral vision with our helmets with special side filters. These impact resistant polycarbonate, shade 5 filters increase viewing area by over 100%.



Special Ventilation

The Speedglas helmet features aerodynamically designed vents to help remove exhaled air and to prevent entry of welding smoke. This is a comfort and safety feature that welders really appreciate.



3M™ Speedglas™ FlexView System

Developed specifically for welding and welding preparation, the user simply lifts the spring-mounted filter assembly for a better view for chipping, grinding and prep work. The spring holds the filter in place on top of the helmet, giving a clear view through the clear FlexView faceshield.



3M™ Speedglas™ ProTop System

Provides comfortable, well-balanced hard hat protection. In the up position, the helmet "nests" down low over the hard hat for a low center of gravity. A pivot mechanism holds the helmet in both positions.



Selection Chart (All Speedglas™ Systems are Packaged 1 Per Case)

Product	Standard Helmet	SideWindows	ProTop	ProTop with SideWindows	FlexView	FlexView with SideWindows	FlexView with ProTop	FlexView with ProTop and SideWindows
Utility	04-0014-10U*	Not available	Not available	Not available	Not available	Not available	Not available	Not available
9000F	04-0012-10**	04-0012-10SW**	04-0015-10**	04-0015-10SW**	04-0016-10**	04-0016-10SW**	04-1516-10**	04-1516-10SW**
9000XF	04-0012-10X**	04-0012-10XSW**	04-0015-10X**	04-0015-10XSW**	04-0016-10X**	04-0016-10XSW**	04-1516-10X**	04-1516-10XSW**
9002V	04-0021-31	04-0012-31SW	04-0015-31	04-0015-31SW	04-0016-31	04-0016-31SW	04-1516-31	04-1516-31SW
9002X	04-0012-21	04-0012-21SW	04-0015-21	04-0015-21SW	04-0016-21	04-0016-21SW	04-1516-21	04-1516-21SW

* Last two number indicate Shade, either 10 or 11

** Last two number indicate Shade, either 10, 11 or 12. For example, a 9000F lens in a standard helmet, shade 10 would be product number 04-0012-10. The same helmet in shade 11 would be product number 04-0012-11.

PAINT SPRAY APPLICATIONS



Painters must be properly protected at all times. Even short periods of unprotected exposures to paint mists and vapors can cause serious health problems. 3M offers comfortable and effective safety products for these applications. To help ensure that painters are protected at all times of exposure, it is critical that a cartridge changeout schedule be established and followed.

3M™ Disposable Half Facepiece Respirator 51P71, 52P71, 53P71

- Disposable design
- Helps protect against organic vapors
- Filters solid and liquid particles including those containing oil
- Permanently attached cartridges and replaceable filters



Part Number	OV/P95 Respirator Assembly Description	Respirators Per Case
51P71	Small	12
52P71	Medium	12
53P71	Large	12

3M™ Professional Series Half Facepiece Respirator Packout R7511ES, R7512ES, R7513ES

- 3M™ Cool Flow™ Exhalation Valve for added comfort and easier exhalation in hot and humid work settings
- Reduced heat and moisture build up lead to longer wearing time
- The unique head harness design adds stability and comfort
- Thin-wall design around the nose adds comfort
- Fully maintainable



Part Number	Packout Description	Packouts Per Case
R7511ES	Small	4
R7512ES	Medium	4
R7513ES	Large	4

3M™ Reusable Full Facepiece Respirator Packout 67P71, 68P71, 69P71

- Reusable respirator assembly
- Offers limited eye protection
- Helps protect against organic vapors
- Fully maintainable



Part Number	Packout Description	Packouts Per Case
67P71	Small	2
68P71	Medium	2
69P71	Large	2

3M™ Organic Vapor Monitor 3500/3510

- Determine exposure levels to vapors
- Place on painter, in spray booth or in mixing room for the full work day
- Can be used to help establish a cartridge changeout schedule



Part Number	Description	Monitors Per Case
3500	OV Monitor	10
3510	OV Monitor, Includes Prepaid Analysis	5

See page 60 for Important WARNINGS

3M™ DUAL CARTRIDGE RESPIRATORS FOR GRINDING, SANDING, WELDING AND PAINT SPRAY APPLICATIONS

Facepieces



Half Facepiece
7501 (Small)
7502 (Medium)
7503 (Large)



Full Facepiece
6700 (Small)
6800 (Medium)
6900 (Large)



Full Facepiece
7800S (Small)
7800S (Medium)
7800S (Large)

Part Number	Facepiece Description	Facepieces Per Box	Boxes Per Case
7501	Small	1	10
7502	Medium	1	10
7503	Large	1	10
6700	Small Facepiece	1	4
6800	Medium Facepiece	1	4
6900	Large Facepiece	1	4
7800S-S	Small Facepiece	1	4
7800S-M	Medium Facepiece	1	4
7800S-L	Large Facepiece	1	4

For Grinding, Sanding, Welding



Particulate Filter
2071, P95



Particulate Filter
2091, P100



Particulate Filter
2097, P100



Particulate Filter
7093, P100

Part Number	Filters Per Bag	Bags Per Case
2071	2	50
2091	2	50
2097	3	50
7093	4	15
7093B	4	36

For Paint Spray



Replacement Retainer
501



Replacement Filter
5P71, P95



Replacement
OV Cartridge 6001



Replacement Cartridge/Filter
Packout R6022

Part Number	Description	Filters/Cartridges Per Box	Boxes Per Case
501	Filter Retainer	20	5
5P71	Replacement Filter	10	10
6001	Organic Vapor Cartridge	2	30
R6022	Replacement Cartridge/Filter Packout	1	5



Packouts: Includes facepieces with cartridges/filters. This is a good way to start a 3M respirator program.



Professional Series
Respirator OV/P95



Full Facepiece
Respirator OV/P95



Half Facepiece
Respirator P100

Part Number	Packout Description	Packouts Per Case
R7511ES	Small	4
R7512ES	Medium	4
R7513ES	Large	4

Part Number	Packout Description	Packouts Per Case
67P71	Small	2
68P71	Medium	2
69P71	Large	2

Part Number	Packout Description	Packouts Per Case
6191	Small	24
6291	Medium	24
6391	Large	24

3M™ GVP POWERED AIR PURIFYING RESPIRATORS (PAPRs) FOR PAINT SPRAY APPLICATIONS

3M™ Belt-Mounted Powered Air Purifying Respirators

The 3M™ Belt-Mounted PAPR combines a high level of protection with great performance and versatility. This innovative design is able to operate with the 3M™ H-Series Hoods, L-Series Headgear and the Full Facepieces 7800S and 6000 Series.

The GVP-1 PAPR Assembly Includes:

- Motor Blower GVP-100
- Power Cord GVP-110
- Battery Pack GVP-111
- Battery Charger GVP-112
- Flow Meter GVP-113
- Blower Plugs GVP-115
- Filter Plugs GVP-116
- Web Belt GVP-127
- Web Shoulder Strap GVP-128

Part Number	PAPR Per Box	Box Per Case
GVP-1	1	1

Part Number	Description	Packs Per Case
L-122	Breathing Tube (for use with L-Series headgear)	1
GVP-123	Breathing Tube (for GVP-1 with 6000 Series/7800S Full Facepieces)	2
GVP-122	Breathing Tube (for GVP-1 with H-Series Hoods)	1

3M™ Belt-Mounted PAPR with Comfort Belt GVP-PSK/07190

This system includes all of the components that make up our PAPR with Bumpcap and is now available as a single part number in a single package.

Includes:

- All components from GVP-CB assembly
- Bumpcap with Wide View Faceshield L-501
- Breathing Tube L-122
- Comfort Belt-Mounted PAPR Assembly
- Organic Vapor/HEPA Cartridge GVP-441
- Shower Cover GVP-119
- (5) Peel-off Lens Covers L-133

Part Number	Description	Packs Per Case
GVP-PSK/07190	PAPR Paint Spray Kit	1



Part Number	Description	Packs Per Case
L-501	Bumpcap with Wide View Faceshield	1
7800S-S	Small Facepiece	4
7800S-M	Medium Facepiece	4
7800S-L	Large Facepiece	4
6700	Small Facepiece	4
6800	Medium Facepiece	4
6900	Large Facepiece	4
H-411	Hood Assembly with Collar and Cap Suspension, Tychem® QC	1
H-412	Hood Assembly with Collar and Hardhat, Tychem® QC	1



Comfort Belt-Mounted PAPR Assembly GVP-CB

Each Assembly Includes:

- Motor Blower GVP-112
- Flow Meter GVP-113
- Power Cord GVP-110
- Blower Plugs GVP-115
- Flow Meter Adapter L-181
- Adjustable Comfort Belt CB-1000



Part Number	Description	Packs Per Case
GVP-CB	Comfort Belt-Mounted PAPR Assembly (one size fits most)	1



GVP-401	Organic Vapor Cartridge (organic vapor only)	
GVP-440	HEPA Filter (particulate only)	
GVP-441	Organic Vapor/HEPA Cartridge (organic vapor or particulate)	

Part Number	Description	Packs Per Case
GVP-401	Organic Vapor Cartridge	6
GVP-440	HEPA Filter	8
GVP-441	Organic Vapor/HEPA Cartridge	6

3M™ SUPPLIED AIR RESPIRATOR SYSTEMS USING 3M™ H-SERIES HOODS



Hood Assembly
(with Collar and Cap)
H-411



Hood Assembly
(with Inner Shroud and Hardhat)
H-422

Part Number	Description	Packs Per Case
H-411	Hood Assembly with Collar and Cap Suspension Tychem® QC	1
H-422	Hood Assembly with Inner Shroud and Hardhat Tychem® QC	1



Breathing Tube
W-5114

Part Number	Description	Packs Per Case
W-5114	High Pressure Breathing Tube (60-100 psi Supply Pressure)	1



Vortex Cooling Assembly
W-2862



Air Regulating Valve Assembly
W-2907



Low Pressure Assembly
W-3018

Part Number	Description	Packs Per Case
W-2862	Vortex Air Cooling Assembly	1
W-2907	Air Regulating Valve Assembly	1
W-3018	Low Pressure Adapter Assembly	1



High Pressure Hose, 3/8"
W-9435-25 ft.
W-9435-50 ft.
W-9435-100 ft.



Low Pressure Hose, 1/2"
W-3020-25 ft.
W-3020-50 ft.
W-3020-100 ft.

Part Number	Air Hose Description	Packs Per Case
W-9435-25	High Pressure 25', 3/8" ID	1
W-9435-50	High Pressure 50', 3/8" ID	1
W-9435-100	High Pressure 100', 3/8" ID	1
W-3020-25	Low Pressure 25', 1/2" ID	1
W-3020-50	Low Pressure 50', 1/2" ID	1
W-3020-100	Low Pressure 100', 1/2" ID	1



Portable Air Purification Panel
(50 cfm) with CO Filtration
and Monitor, 4 Outlets
256-02-00



Portable Air Purification Panel
(100 cfm) with CO Monitor, 8 Outlets
256-02-01



Portable Air Purification Panel
(50 cfm) without CO Monitor
W-2806



Retrofit CO Monitor Kit
W-2808

Part Number	Description	Packs Per Case
256-02-00	Portable Air Purification Panel (50 cfm) with CO Filtration and Monitor, 4 Outlets	1
256-02-01	Portable Air Purification Panel (100 cfm) with CO Monitor, 8 Outlets	1
W-2806	Portable Air Purification Panel (50 cfm) without CO Monitor	1
W-2808	Retrofit CO Monitor Kit	1

3M™ SUPPLIED AIR RESPIRATOR SYSTEMS USING 3M™ L-SERIES HEADGEAR



Part Number	Description	Packs Per Case
L-501	Bumpcap with Wide View Faceshield	1
L-122	Breathing Tube (for use with L-Series headgear)	1



Bumpcap with Wide View Faceshield L-501

Breathing Tube L-122



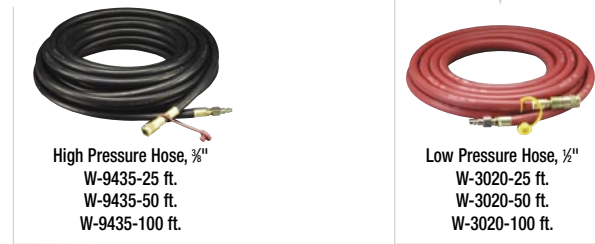
Vortex Cooling Assembly V-100

Air Regulating Valve Assembly V-300

Low Pressure Connector Assembly V-400

Part Number	Description	Packs Per Case
V-100	Vortex Cooling Assembly	1
V-300	Air Regulating Valve Assembly	1
V-400	Low Pressure Connector Assembly	1

Part Number	Air Hose Description	Packs Per Case
W-9435-25	High Pressure 25', 3/8" ID	1
W-9435-50	High Pressure 50', 3/8" ID	1
W-9435-100	High Pressure 100', 3/8" ID	1
W-3020-25	Low Pressure 25', 1/2" ID	1
W-3020-50	Low Pressure 50', 1/2" ID	1
W-3020-100	Low Pressure 100', 1/2" ID	1



High Pressure Hose, 3/8"
W-9435-25 ft.
W-9435-50 ft.
W-9435-100 ft.

Low Pressure Hose, 1/2"
W-3020-25 ft.
W-3020-50 ft.
W-3020-100 ft.



Portable Air Purification Panel (50 cfm) with CO Filtration and Monitor, 4 Outlets
256-02-00

Portable Air Purification Panel (100 cfm) with CO Monitor, 8 Outlets
256-02-01

Portable Air Purification Panel (50 cfm) without CO Monitor
W-2806

Retrofit CO Monitor Kit
W-2808

Part Number	Description	Packs Per Case
256-02-00	Portable Air Purification Panel (50 cfm) with CO Filtration and Monitor, 4 Outlets	1
256-02-01	Portable Air Purification Panel (100 cfm) with CO Monitor, 8 Outlets	1
W-2806	Portable Air Purification Panel (50 cfm) without CO Monitor	1
W-2808	Retrofit CO Monitor Kit	1

3M™ DUAL AIRLINE SUPPLIED AIR RESPIRATOR SYSTEMS USING 3M™ FACEPIECES



Full Facepiece
6700 (Small)
6800 (Medium)
6900 (Large)



Full Facepiece
7800S (Small)
7800S (Medium)
7800S (Large)



Half Facepiece
7501 (Small)
7502 (Medium)
7503 (Large)

Part Number	Facepiece Description	Facepieces Per Box	Box Per Case
6700	Small Facepiece	1	4
6800	Medium Facepiece	1	4
6900	Large Facepiece	1	4
7800S-S	Small Facepiece	1	4
7800S-M	Medium Facepiece	1	4
7800S-L	Large Facepiece	1	4
7501	Small	1	10
7502	Medium	1	10
7503	Large	1	10



Back-Mounted Adapter Kits
SA-2000 - High Pressure
SA-2000LP - Low Pressure



Combination Back-Mounted Adapter Kits
SA-2100 - High Pressure
SA-2100LP - Low Pressure

Combination kits allow for negative or positive pressure use.

For Negative Pressure



Organic Vapor Cartridge
6001



Particulate Filter
5P71



Filter Retainer
501

SA-2000LP Adapter Kit (low pressure)

Includes SA-2500 Back-Mounted Breathing Tube, GVP-127 Web Belt and SA1009 Air Regulator or SA-1029 Connector (low Pressure).

Combination Dual Airline SA-2100 or SA-2100LP (low pressure) Adapter Kit

Includes SA-2600 Combination Back-Mounted Breathing Tube, GVP-127 Web Belt and SA-1009 Air Regulator or SA-1029 Connector (low pressure). Cartridges/filters not included.



High Pressure Hose, 3/8"
W-9435-25 ft.
W-9435-50 ft.
W-9435-100 ft.



Low Pressure Hose, 1/2"
W-3020-25 ft.
W-3020-50 ft.
W-3020-100 ft.

Part Number	Adapter Kit Description	Kits Per Case
SA-2000	High Pressure	1
SA-2000LP	Low Pressure	1
SA-2100	High Pressure	1
SA-2100LP	Low Pressure	1

Part Number	Description	Filters/Cartridges Per Box	Boxes Per Case
501	Filter Retainer	20	5
5P71	Particulate Filter	10	10
6001	Organic Vapor Cartridge	2	30

Part Number	Air Hose Description	Packs Per Case
W-9435-25	High Pressure 25', 3/8" ID	1
W-9435-50	High Pressure 50', 3/8" ID	1
W-9435-100	High Pressure 100', 3/8" ID	1
W-3020-25	Low Pressure 25', 1/2" ID	1
W-3020-50	Low Pressure 50', 1/2" ID	1
W-3020-100	Low Pressure 100', 1/2" ID	1



Portable Air Purification Panel (50 cfm) with CO Filtration and Monitor, 4 Outlets
256-02-00



Portable Air Purification Panel (100 cfm) with CO Monitor, 8 Outlets
256-02-01



Portable Air Purification Panel (50 cfm) without CO Monitor
W-2806



Retrofit CO Monitor Kit
W-2808

Part Number	Description	Packs Per Case
256-02-00	Portable Air Purification Panel (50 cfm) with CO Filtration and Monitor, 4 Outlets	1
256-02-01	Portable Air Purification Panel (100 cfm) with CO Monitor, 8 Outlets	1
W-2806	Portable Air Purification Panel (50 cfm) without CO Monitor	1
W-2808	Retrofit CO Monitor Kit	1



3M™ SORBENT PRODUCTS



3M sorbents are used extensively in a wide variety of applications. From routine maintenance to emergency spill cleanup, we offer a sorbent that is designed for the specific job. And these products are designed with total cost in mind. By considering all cost factors—sorbent capacity, labor, disposal and the product cost—3M sorbents are an economical and effective choice.



3M™ Maintenance Sorbents

- Ideal for many facility maintenance jobs
- Designed to absorb non-aggressive liquids such as oils, coolants, cutting fluids, aqueous-based fluids and petroleum-based products
- Can be wrung out and reused numerous times with virtually no loss of sorbent capacity
- Easy to handle; they can be put in place in just minutes
- Dust free and contain no abrasive granules that could damage equipment
- Lightweight and very versatile

Part Number	Approx. Dimensions/ Sorbent Capacity	Each Per Case
M-FL550DD	5" X 50'/Box (9 Gallons/Box)	3
M-RL15150DD	15 1/2" X 150' Roll (20 Gallons/Case)	1
M-RL38150DD	38" X 150' Roll (50 Gallons/Case)	1
M-DC22DD	22" Drum Cover w/skirt (13 Gallons/Case)	25
M-RG36300E	36" X 300' Rug (32 Gallons/Roll)	1
M-RGC36100E	36" X 100' Rug w/coating (10.5 Gallons/Roll)	1

3M also offers a complete line of sorbents for responding to chemical spills. See your 3M Distributor for details.



3M™ Petroleum Sorbents

- Used extensively for cleaning up and recovering petroleum-based liquids
- Effective for use under leaking equipment
- Dust free and contain no abrasive granules that could damage equipment
- Can be incinerated with only 0.2% ash residue
- Repels water while absorbing petroleum based liquids

Part Number	Approx. Dimensions/ Sorbent Capacity	Packaging
29026	7" X 15" (35 Gallons/Bag)	16 Pillows/Case
T-210	25 lbs./Bag (35 Gallons/Bag)	1 Bag/Bale
T-240	5" X 14" X 25" (2 lbs./Pillow, 3.5 Gallons/Pillow)	10 Pillows/Bale
T-30	7" X 15" (.5 Gallons/Pillow)	16 Pillows/Bale
T-270	8" Diameter X 10' (10 lbs./Boom, 20 Gallons/Boom)	4 Booms/Bale
T-280	5" Diameter X 10' (6.5 lbs./ Double Boom, 10 Gallons/Boom)	4 Double Booms/Bale
P-FL550DD	5" Diameter X 50'/Box (8 Gallons/Box)	3 Boxes/Case
T-100	38" X 144' X 3/8" (51 Gallons/Rolls)	1 Roll/Bag
HP-100	38" X 144' X 1/4" (51 Gallons/Rolls)	1 Roll/Bag
T-126	17" X 100' X 3/8" (17 Gallons/Sweep)	1 Sweep/Bale
T-151	17" X 19" X 3/8" (.13 Gallons/Pad)	200 Pads/Bale
T-156	17" X 19" X 1/4" (.25 Gallons/Pad)	100 Pads/Bale
T-157	34" X 38" X 3/8" (1 Gallon/Pad)	50 Pads/Bale
HP-156	17" X 19" X 1/4" (1 Gallon/Pad)	100 Pads/Bale
HP-157	34" X 38" X 1/4" (1 Gallon/Pad)	50 Pads/Bale
HP-255	17" X 19" X 1/2" (.5 Gallons/Pad)	50 Pads/Bale
HP-256	17" X 119" X 1/2" (.5 Gallons/Pad)	100 Pads/Bale

3M™ Spill Kits and Response Packs

- The perfect solution for emergency response
- 5-gallon Spill Kits are compact and easy to store until needed
- 31-gallon Spill Kits are packed in a color-coded, 20-gallon drum



Part Number	Kit Contents	Kits Per Case
P-SKFL31	Petroleum Sorbent - Folded (P-FL550DD) - 2 Rolls 5" X 50' Folded (19" X 50' fully opened) Petroleum Sorbent Pads (HP-156) - 30 Each 17" X 19" Temporary Disposal Bags and Ties - 3 White Drum with lid and plastic closure ring 1 Each 20 Gallon	1
P-SKFL5	5" X 26' with Perforations every 16" (19" X 26' fully opened) One temporary disposal bag and tie	3

See page 60 for Important WARNINGS

3M™ HEAD AND FACE PROTECTION PRODUCTS

Head injuries are among the most common injuries that occur in all industries. For that reason, industry standards have been established to protect against such injuries. 3M offers a line of hard hats that can be used in virtually all industrial applications. These hard hats meet the requirements of ANSI Z89.1-1997, Type 1, Class C, E and G. They are available with a slide or ratchet suspension for size adjustment.



3M™ Omega II™ Hard Hats, Standard Suspension

- Lightweight and well-balanced for worker comfort and acceptance
- Slide sizing adjustment with six-point suspension
- Fits sizes 6 ½ – 7 ¾

3M™ Omega II™ Hard Hats, Ratchet Suspension

- This design allows the user to adjust the size for perfect fit without removing the hard hat
- Soft, removable brow pad
- Polyethylene headband allows maximum adjustability for greatest comfort
- Fit sizes 5 ¾ – 8

3M™ Omega II™ Hard Hats are designed with the user in mind



Standard Suspension



Ratchet Suspension

3M™ Hard Hat Mounted Ear Muffs 1450

- Two-position design fits a variety of hard hats
- Ear muffs flip up and stay in position when not in use
- Noise reduction rating of 23dB
- Use with Replacement Parts Kit 1442

Part Number	UPC Number	Description	Each Per Case
1450	051138-29335	Hard Hat Mounted Ear Muffs	20
1901	051138-76809	Omega II™ Hard Hat White, Standard Suspension	30
1902	051138-76810	Omega II™ Hard Hat Yellow, Standard Suspension	30
1903	051138-76811	Omega II™ Hard Hat Orange, Standard Suspension	30
1905	051131-52590	Omega II™ Hard Hat Red, Standard Suspension	30
1906	051131-52591	Omega II™ Hard Hat Blue, Standard Suspension	30
1911	051138-76813	Omega II™ Hard Hat White, Ratchet Suspension	30
1912	051138-76814	Omega II™ Hard Hat Yellow, Ratchet Suspension	30
1915	051131-52592	Omega II™ Hard Hat Red, Ratchet Suspension	30
1916	051131-52593	Omega II™ Hard Hat Blue, Ratchet Suspension	30
1904	051138-76812	Replacement Standard Suspension	10
1914	051138-76816	Replacement Ratchet Suspension	30
1950	051138-76831	Replacement Brow Pad	10

3M™ Face Shield Kit 1631

- Uses replaceable polycarbonate material for clearer vision
- Cam lock helps hold the face shield in place
- Simple slide-sizing adjustment
- Use Replacement Visor Kit 1632



Part Number	UPC Number	Description	Each Per Case
1631	051138-37106	Faceshield Kit	5

See page 60 for Important WARNINGS

3M™ PROTECTIVE EYEWEAR



Eye injuries can result from many different workplace hazards including splashes, debris and impact. 3M eye protection products can help enhance safety in areas where such hazards exist. These products are available in several styles with different lens/frame color combinations for greater personal choice. They are comfortable, fashionable and are a very good value.

3M™ Protective Eyewear 1701, 1702

- Polycarbonate lenses with 99% UV protection
- Lightweight and comfortable
- High worker acceptance

Part Number	UPC Number	Description	Each Per Case	Packs Per Case
1701	051138-76800	Protective Eyewear, Smoke Frame, Smoke Lens	1	24
1702	051138-76801	Protective Eyewear, Clear Frame, Clear Lens	1	24

3M™ Protective Eyewear 1722, 1723, 1740, 1743

- Polycarbonate lenses with 99% UV protection
- Wraparound design
- Non-slip rubber head grip for wearer comfort
- 5-position adjustable temple
- Soft vinyl nose pad

Product Number	UPC Number	Description	Each Per Case	Packs Per Case
1722	051138-76806	Protective Eyewear, Red, White and Blue Frame, Clear Lens	1	24
1723	051131-37109	Protective Eyewear, Black Frame, Amber Lens	1	24
1740	051131-37110	Protective Eyewear, Clear Lens	1	24
1743	051131-37112	Protective Eyewear, Amber Lens	1	24

3M™ Protective Eyewear 1750, 1751, 1752, 1760

- Stylish, contemporary design
- Lightweight, comfortable lens
- Wraparound design provides side protection
- Shatter-resistant polycarbonate lens
- Provides 99% UV protection

Part Number	UPC Number	Description	Each Per Case	Packs Per Case
1750	051131-37113	Protective Eyewear, Gray Frame, Clear Lens	1	24
1751	051131-37114	Protective Eyewear, Gray Frame, Smoke Lens	1	24
1752	051131-37115	Protective Eyewear, Blue Frame, Mirrored Lens	1	24
1760	051131-37116	Protective Eyewear, Clear Frame, Clear Lens	1	24

3M™ Visitor Specs 1611, Clear

- Polycarbonate lenses with 99% UV protection
- Intended for visitors and other short-term users
- Can be worn alone or over prescription glasses



Part Number	UPC Number	Description	Each Per Pack	Packs Per Case
1611	051131-37101	Visitor Specs, Clear	1	300

See page 60 for Important WARNINGS

3M™ HEARING PROTECTION PRODUCTS

In a typical workplace, noise is an ever-constant problem. To protect themselves, workers must have available and always use comfortable and effective products to help prevent long-term hearing loss due to exposure to pounding, grinding, high-pressure spray operations, air wrenches, overhead cranes, etc. 3M offers a variety of ear muffs and ear plugs to reduce noise levels that are present in most industrial settings.



3M™ Padded Ear Muffs 1440

- Comfortable padded headband
- Lightweight
- Noise Reduction Rating of 24dB*
- Contoured ear cushion seal
- Use with Replacement Parts Kit 1442



3M™ Three-Position Ear Muffs 1427

- Rotating head band and adjustable strap provides secure fit in any of the three positions
- Noise Reduction Rating of 27dB* when band is worn over or behind the head. Noise Reduction Rating is 26dB* when band is worn under the chin.

Part Number	UPC Number	Pairs Per Case
1440	051138-29334	20
1427	051138-76981	20

3M™ Reusable Ear Plugs 1260, 1270

- Triple-flange plugs securely fits into the ear canal for comfort and reliable protection
- Noise reduction rating of 24dB*
- 1270 has a braided cord for convenience



Part Number	UPC Number	Description	Pairs Per Box	Boxes Per Case
1260	051138-66226	Reusable	100	5
1270	051138-66228	Reusable, Corded	100	5



3M™ Banded Hearing Protector 1310

- The unique band stays in place without a lot of pressure
- Noise Reduction Rating of 21dB* when band is worn behind the head
- Noise Reduction Rating of 20dB* when band is worn under the chin
- Use with Replacement Pads 1311

Part Number	UPC Number	Each Per Box	Boxes Per Case
1310	051138-66003	10	5
1311	051138-66004	20	5



3M™ Foam Ear Plugs 1120, 1130

- Noise Reduction Rating of 28dB*
- Made of extra soft, very comfortable material
- Hypo-allergenic
- 1130 has a braided cord for convenience

Part Number	Description	Pairs Per Box	Boxes Per Case
1120	Ear Plug	200	5
1130	Corded Ear Plug	100	5

* Research suggests that the Noise Reduction Rating (NRR) may overestimate the protection provided by hearing protectors during typical use. 3M recommends reducing the NRR by 50% for estimating the amount of noise reduction provided.

See page 60 for Important WARNINGS

IMPORTANT WARNINGS



⚠ WARNING : Negative Pressure Respirators

Each respirator must be properly selected based on the contaminant and concentration levels to which the worker is exposed. Respirators shown in this catalog may be used for exposures below 10X the PEL or applicable government occupational exposure limits, whichever is lower.

Failure to follow the use and fitting instructions and warnings for proper use contained on the respirator packaging and/or failure to wear the respirator during all times of exposure can reduce respirator effectiveness and **may result in sickness or death**. For proper use, see your supervisor. For more information, call 3M OH&ESD Technical Service at 1-800-243-4630. In Canada, call 1-800-267-4414.



⚠ WARNING : Positive Pressure Respirators

These respirators help reduce exposure to certain airborne contaminants. Use by untrained or unqualified persons, or use not in accordance with the instructions, may adversely affect product performance and **result in sickness or death**.

3M™ Positive Pressure Respirators are to be used only by qualified persons properly trained in their use and maintenance, and only in accordance with their *User Instructions* provided as part of product packaging. Each person using these products must first read and understand the *User Instructions*. For proper use, see supervisor, packaging or call 3M OH&ESD Technical Service at 1-800-243-4630. In Canada, call 1-800-267-4414.

⚠ WARNING : Head And Face Protection

These safety products provide limited protection only. **Misuse or failure to follow warnings and instructions may result in serious personal injury or death**. For proper use, see supervisor, instructions and warnings, or call 3M OH&ESD Technical Service in U.S.A., 1-800-243-4630. In Canada, call 1-800-267-4414.

⚠ WARNING : Protective Eyewear

These safety products provide limited protection only. Do not use when performing torch burning, torch cutting, torch welding, electric (arc) welding, furnace corrections, molten metals operations, or any other operations which expose your eyes to harmful levels of infrared and ultra-violet radiation. **Misuse or failure to follow warnings and instructions may result in serious personal injury, including blindness, or death**. For proper use, see supervisor, product instructions and warnings or call 3M OH&ESD Technical Service at 1-800-243-4630. In Canada, call 1-800-267-4414.

⚠ WARNING : Hearing Protection Products

These hearing protection products help prevent hearing loss against certain noises. To provide proper protection, the hearing protector should be (1) suitable for the job, (2) fitted properly in/on the ear, (3) worn during all times of exposure to noise, and (4) replaced when damaged or otherwise necessary. Failure to fit and use hearing protectors according to these instructions will reduce their effectiveness. Failure to wear hearing protectors 100% of the time that you are exposed to hazardous noise may dramatically increase your risk of developing hearing loss. Keep ear plugs away from infants and small children. They may get caught in a child's windpipe.

⚠ WARNING : Sorbents

Failure to properly handle and dispose of sorbents contaminated by hazardous materials can result in serious physical injury or death and/or environmental harm. For proper handling, consult the Material Safety Data Sheet for the material absorbed, applicable safety and health standards, contact your supervisor, or call 3M.

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021200 65173 1	3	021200 82667 2	3	021200 87966 1	24	048011 53099 4	17
021200 65179 3	24	021200 83487 5	6	021200 87977 7	16	048011 53157 1	4
021200 65184 7	21	021200 83528 5	16	021200 87978 4	16	048011 53160 1	4
021200 65197 7	12	021200 83640 4	15	021200 87979 1	16	048011 53162 5	4
021200 65198 4	12	021200 83643 5	15	021200 87981 4	16	048011 53164 9	4
021200 65201 1	11	021200 83694 7	15	021200 87982 1	16	048011 53166 3	4
021200 65202 8	11	021200 83695 4	15	021200 87982 1	16	048011 53168 7	4
021200 65203 5	11	021200 83852 1	33	021200 87982 1	16	048011 53220 2	4
021200 65204 2	11	021200 83855 2	33	021200 88010 0	7	048011 53223 3	4
021200 65205 9	11	021200 83856 9	35	021200 88031 5	23	048011 53224 0	4
021200 65206 6	11	021200 83896 5	33	021200 88066 7	7	048011 53227 1	4
021200 65212 7	12	021200 83897 2	28	021200 88069 8	6	048011 53230 1	11
021200 65214 1	11	021200 83898 9	28	021200 88070 4	6	048011 53232 5	11
021200 65216 5	11	021200 83898 9	31	021200 88071 1	6	048011 53234 9	8
021200 65217 2	10	021200 83899 6	28	021200 88072 8	6	048011 53239 4	29
021200 65219 6	13	021200 83899 6	31	021200 88073 5	6	048011 53246 2	31
021200 65220 2	13	021200 83900 9	28	021200 88074 2	6	048011 53247 9	8
021200 65223 3	13	021200 83900 9	31	021200 88075 9	6	048011 53268 4	4
021200 65226 4	13	021200 83901 6	28	021200 88076 6	6	048011 53269 1	4
021200 65235 6	12	021200 83901 6	31	021200 88077 3	6	048011 53270 7	4
021200 65282 0	6	021200 83902 3	28	021200 88079 7	4	048011 53277 6	34
021200 65292 9	22	021200 83903 0	28	021200 88080 3	4	048011 53379 7	32
021200 65321 6	11	021200 83904 7	28	021200 88082 7	4	048011 56703 7	38
021200 65374 2	25	021200 83905 4	28	021200 88083 4	4	048011 56725 9	32
021200 65429 9	12	021200 83906 1	28	021200 88089 6	6	048011 56742 6	9
021200 65477 0	19	021200 83907 8	28	021200 88091 9	6	048011 56744 0	9
021200 65736 8	33	021200 83908 5	28	021200 88092 6	4	048011 56776 1	6
021200 65770 2	29	021200 83926 9	33	021200 88094 0	11	048011 56778 5	6
021200 67190 6	35	021200 83930 6	33	021200 88095 7	11	048011 56791 4	35
021200 67191 3	35	021200 83933 7	33	021200 88096 4	11	048011 56800 3	39
021200 67201 9	29	021200 83990 0	35	021200 89586 9	15	048011 56801 0	32
021200 67202 6	29	021200 83991 7	35	021200 89588 3	15	048011 56810 2	38
021200 67295 8	34	021200 84108 8	35	021200 94490 1	31	048011 56827 0	5
021200 67295 8	34	021200 84109 5	35	021200 96132 8	35	048011 56876 8	20
021200 67296 5	34	021200 84161 3	33	021200 96133 5	35	048011 56877 5	20
021200 67296 5	34	021200 84200 9	35	021200 96227 1	40	70-0000-8321 5	32
021200 67612 3	34	021200 84229 0	35	021200 96249 3	22	70-0000-8412 2	30
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