TBP Converting, Inc.
3M Scotch-Weld Epoxy Adhesive DP100 Plus

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Technical Data Sheet

3M™ Scotch-Weld™ Epoxy Adhesive DP100 Plus Clear

Product Description

3M™ Scotch-Weld™ Epoxy Adhesive DP100 Plus Clear is a fast setting, two-part, 1:1 mix ratio mercaptan-cured epoxy adhesive. It is unique among fast setting mercaptan cure epoxies in that it combines high shear strength with good peel performance properties. Scotch-Weld epoxy adhesive DP100 Plus Clear is transparent and slightly flexible when cured.
Available in bulk containers as 3M™ Scotch-Weld™ Epoxy Adhesive DP100 Plus B/A Clear.

Product Features

- 4 minute worklife
- High shear and peel strength
- Slightly flexible
- 1:1 mix ratio
- Recognized as meeting UL 94 HB

Technical Information Note

The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Typical Uncured Physical Properties

Property	Values	Additional Information
Color	Clear	View
Notes: Colors may vary from nearly white to yellow/amber. Adhesive performance is not affected by color variation.		
Base Color	Clear	
Accelerator Color	Clear	
Base Viscosity	4000 to 11000 cP	View
Test Method: 3M C1d Temp C: 27C Temp F: 80F Notes: Procedure involves Brookfield RVF, #7 spindle, 20 rpm. Measurement taken after 1 minute rotation.		
Accelerator Viscosity	7000 to 13000 cP	View
Test Method: 3M C1d Temp C: 27C		

Temp F: 80F

Notes: Procedure involves Brookfield RVF, #7 spindle, 20 rpm. Measurement taken after 1 minute rotation.

Base Resin	Epoxy
Accelerator Resin	Mercaptan
Base Net Weight	9.7 to 9.9 lb/gal
Accelerator Net Weight	9.4 to 9.8 lb/gal
Mix Ratio by Volume (B:A)	1:1
Mix Ratio by Weight (B:A)	1:1

Typical Mixed Physical Properties

Property	Values	Additional Information
Open Time (min)	1 to 4 min	View

Notes: Max time allowed after applying adhesive to a substrate before bond must be closed and fixed. Cure times approximate and depend on adhesive temperature. Hotmelts: The approx. bonding range of a 1/8" bead of molten adhesive on a non-metallic surface.

Exotherm max temp	128 °F	View

Test Condition: 2g mass

Notes: Exotherm determined using the stated mass mixed for 1 minute and then by electronic thermocouple measuring the peak temperature and time to that temperature.

Exotherm time to reach max temp	6 min	View

Test Condition: 2g mass

Notes: Exotherm determined using the stated mass mixed for 1 minute and then by electronic thermocouple measuring the peak temperature and time to that temperature.

Exotherm max temp	260 °F	View

Test Condition: 20g mass

Notes: Exotherm determined using the stated mass mixed for 1 minute and then by electronic thermocouple measuring the peak temperature and time to that temperature.

Exotherm time to reach max temp	3 min	View

Test Condition: 20g mass

Notes: Exotherm determined using the stated mass mixed for 1 minute and then by electronic thermocouple measuring the peak temperature and time to that temperature.

Worklife, 2g mixed	4 min	View

Test Method: 3M C3180

Temp C: 23C
Temp F: 73F

Notes: Procedure involves periodically measuring a 2 gram mixed mass for self leveling and wetting properties. This time will also approximate the usable worklife in an 3M™ EPX™ Applicator mixing nozzle.

Worklife, 20g mixed	3 min	View

Test Method: 3M C3180

Temp C: 23C
Temp F: 73F

Notes: Procedure involves periodically measuring a 2 gram mixed mass for self leveling and wetting properties. This time will also approximate the usable worklife in an 3M™ EPX™ Applicator mixing nozzle.

Worklife	3 to 4 min	View

Test Method: 3M C3180

Temp C: 23C
Temp F: 73F

Notes: Procedure involves periodically measuring a 2 gram mixed mass for self leveling and wetting properties. This time will also approximate the usable worklife in an 3M™ EPX™ Applicator mixing nozzle.

Set Time (min)	20 min	View

Temp C: 23C
Temp F: 73F

Notes: Minimum time required to achieve 50 psi of overlap shear strength. Cure times are approximate and depend on adhesive temperature.

Time to Handling Strength	20 hr	View

Temp C: 23C
Temp F: 73F

Tack Free Time	9 to 10 min	View

Test Method: 3M C3173

Notes: Involves dispensing 0.5 gram amount of adhesive onto substrate and testing periodically for no adhesive transfer to metal spatula.

Time to Full Cure	0.33 hr	View

Temp C: 23C
Temp F: 73F

Notes: The cure time is defined as that time required for the adhesive to achieve a minimum of 80% of the ultimate strength as measured by aluminum-aluminum OLS.

Rate of Strength Buildup 1hr	600 lb/in²	View

Test Method: ASTM D1002

Test Name: Overlap Shear Strength
Dwell/Cure Time: 1.0

Dwell Time Units: hr
Temp C: 23C
Temp F: 72F
Substrate: Etched Aluminum

Notes: 1 in wide 1/2 in overlap specimens with 1 in x 4 in substrates. 0.005-0.008in bondline. Jaw separation 0.1 in/min. Substrate thickness 0.05-0.064 in

Rate of Strength Buildup 6hr	900 lb/in²	View

Test Method: ASTM D1002

Test Name: Overlap Shear Strength
Dwell/Cure Time: 6.0
Dwell Time Units: hr
Temp C: 23C
Temp F: 72F
Substrate: Etched Aluminum

Notes: 1 in wide 1/2 in overlap specimens with 1 in x 4 in substrates. 0.005-0.008in bondline. Jaw separation 0.1 in/min. Substrate thickness 0.05-0.064 in

Rate of Strength Buildup 1day	1100 lb/in²	View

Test Method: ASTM D1002

Test Name: Overlap Shear Strength
Dwell/Cure Time: 1.0
Dwell Time Units: day
Temp C: 23C
Temp F: 72F
Substrate: Etched Aluminum

Notes: 1 in wide 1/2 in overlap specimens with 1 in x 4 in substrates. 0.005-0.008in bondline. Jaw separation 0.1 in/min. Substrate thickness 0.05-0.064 in

Rate of Strength Buildup 7day	2800 lb/in²	View

Test Method: ASTM D1002

Test Name: Overlap Shear Strength
Dwell/Cure Time: 7.0
Dwell Time Units: day
Temp C: 23C
Temp F: 72F
Substrate: Etched Aluminum

Notes: 1 in wide 1/2 in overlap specimens with 1 in x 4 in substrates. 0.005-0.008in bondline. Jaw separation 0.1 in/min. Substrate thickness 0.05-0.064 in

Rate of Strength Buildup 1month	3400 lb/in²	View

Test Method: ASTM D1002

Test Name: Overlap Shear Strength
Dwell/Cure Time: 1.0
Dwell Time Units: month
Temp C: 23C
Temp F: 72F
Substrate: Etched Aluminum

Notes: 1 in wide 1/2 in overlap specimens with 1 in x 4 in substrates. 0.005-0.008in bondline. Jaw separation 0.1 in/min. Substrate thickness 0.05-0.064 in

Typical Physical Properties

Property	Values	Additional Information
Color	Clear	View

Test Name: Cured

Typical Performance Characteristics

Additional Test notes

The following product performance data was obtained in the 3M laboratory under the conditions specified. The following data show typical results obtained with 3M™ Scotch-Weld™ Epoxy Adhesive DP100 Plus Clear when applied to properly prepared substrates, cured, and tested according to the specifications indicated. This data was generated using the 3M™ EPX™ Applicator System equipped with an EPX static mixer, according to manufacturer's directions. Thorough hand mixing should afford comparable results.

Property	Values	Additional Information
Elongation (%)	75 %	View

Test Method: ASTM D882

Dwell/Cure Time: 2.0
Dwell Time Units: hr
Temp C: 23C
Temp F: 72F
Environmental Condition: +2 hr @ 160F(71C)

Notes: Samples were 2 in. dumbbells with 0.125 in. neck and .030 in. sample thickness. Separation rate was 2 inches per minute.

T-Peel Adhesion -55C Etched Aluminum	2 lb/in width	View

Test Method: ASTM D1876

Test Name: T-Peel Adhesion
Temp C: -55C
Temp F: -67F
Substrate: Etched Aluminum

Notes: T-peel strengths were measured on 1 in. wide bonds at 73°F (23°C). The testing jaw separation rate was 20 inches per minute. The substrates were 0.020 in. thick. Samples dwelled for 24 hrs at 23C + 2 hrs at 71C before testing.

T-Peel Adhesion 23C Etched Aluminum	13 lb/in width	View

Test Method: ASTM D1876

Test Name: T-Peel Adhesion
Temp C: 23C
Temp F: 73F
Substrate: Etched Aluminum

Notes: T-peel strengths were measured on 1 in. wide bonds at 73°F (23°C). The testing jaw separation rate was 20 inches per minute. The substrates were 0.020 in. thick. Samples dwelled for 24 hrs at 23C + 2 hrs at 71C before testing.

T-Peel Adhesion 49C Etched Aluminum	15 lb/in width	View

Test Method: ASTM D1876

Test Name: T-Peel Adhesion
Temp C: 49C
Temp F: 120F
Substrate: Etched Aluminum

Notes: T-peel strengths were measured on 1 in. wide bonds at 73°F (23°C). The testing jaw separation rate was 20 inches per minute. The substrates were 0.020 in. thick. Samples dwelled for 24 hrs at 23C + 2 hrs at 71C before testing.

T-Peel Adhesion 66C Etched Aluminum	2 lb/in width	View

Test Method: ASTM D1876

Test Name: T-Peel Adhesion
Temp C: 66C
Temp F: 150F
Substrate: Etched Aluminum

Notes: T-peel strengths were measured on 1 in. wide bonds at 73°F (23°C). The testing jaw separation rate was 20 inches per minute. The substrates were 0.020 in. thick. Samples dwelled for 24 hrs at 23C + 2 hrs at 71C before testing.

T-Peel Adhesion 82C Etched Aluminum	1 lb/in width	View

Test Method: ASTM D1876

Test Name: T-Peel Adhesion
Temp C: 82C
Temp F: 180F
Substrate: Etched Aluminum

Notes: T-peel strengths were measured on 1 in. wide bonds at 73°F (23°C). The testing jaw separation rate was 20 inches per minute. The substrates were 0.020 in. thick. Samples dwelled for 24 hrs at 23C + 2 hrs at 71C before testing.

Solvent Resistance Acetone 1hr	A	View

Environmental Condition: 24hr @ RT + 2hr @ 160F(71C) + Acetone 1hr

Notes: Cured OLS samples immersed in solvent and after dwell, examined for surface attack compared to control. A: Unaffected, no color or texture change B: Slight attack, slight swelling of surface. C: Moderate/severe attack, extreme swelling of surface.

Solvent Resistance Acetone 1month	A	View

Environmental Condition: 24hr @ RT + 2hr @ 160F(71C) + Acetone 1mo

Notes: Cured OLS samples immersed in solvent and after dwell, examined for surface attack compared to control. A: Unaffected, no color or texture change B: Slight attack, slight swelling of surface. C: Moderate/severe attack, extreme swelling of surface.

Solvent Resistance Isopropyl Alcohol 1hr	A	View

Environmental Condition: 24hr @ RT + 2hr @ 160F(71C) + Isopropyl Alcohol 1hr

Notes: Cured OLS samples immersed in solvent and after dwell, examined for surface attack compared to control. A: Unaffected, no color or texture change B: Slight attack, slight swelling of surface. C: Moderate/severe attack, extreme swelling of surface.

Solvent Resistance Isopropyl Alcohol 1month	A	View

Environmental Condition: 24hr @ RT + 2hr @ 160F(71C) + Isopropyl Alcohol 1mo

Notes: Cured OLS samples immersed in solvent and after dwell, examined for surface attack compared to control. A: Unaffected, no color or texture change B: Slight attack, slight swelling of surface. C: Moderate/severe attack, extreme swelling of surface.

Solvent Resistance Freon TF 1hr	A	View

Environmental Condition: 24hr @ RT + 2hr @ 160F(71C) + Freon TF 1hr

Notes: Cured OLS samples immersed in solvent and after dwell, examined for surface attack compared to control. A: Unaffected, no color or texture change B: Slight attack, slight swelling of surface. C: Moderate/severe attack, extreme swelling of surface.

Solvent Resistance Freon TF 1month	A	View

Environmental Condition: 24hr @ RT + 2hr @ 160F(71C) + Freon TF 1mo

Notes: Cured OLS samples immersed in solvent and after dwell, examined for surface attack compared to control. A: Unaffected, no color or texture change B: Slight attack, slight swelling of surface. C: Moderate/severe attack, extreme swelling of surface.

Solvent Resistance Freon TMC 1hr	A	View

Environmental Condition: 24hr @ RT + 2hr @ 160F(71C) + Freon TMC 1hr

Notes: Cured OLS samples immersed in solvent and after dwell, examined for surface attack compared to control. A: Unaffected, no color or texture change B: Slight attack, slight swelling of surface. C: Moderate/severe attack, extreme swelling of surface.

Solvent Resistance Freon TMC 1month	A	View

Environmental Condition: 24hr @ RT + 2hr @ 160F(71C) + Freon TMC 1mo

Notes: Cured OLS samples immersed in solvent and after dwell, examined for surface attack compared to control. A: Unaffected, no color or texture change B: Slight attack, slight swelling of surface. C: Moderate/severe attack, extreme swelling of surface.

Solvent Resistance 1, 1, 1 - Trichloroethane 1hour	A	View

Environmental Condition: 24hr @ RT + 2hr @ 160F(71C) + 1, 1, 1 - Trichloroethane 1hr

Notes: Cured OLS samples immersed in solvent and after dwell, examined for surface attack compared to control. A: Unaffected, no color or texture change B: Slight attack, slight swelling of surface. C: Moderate/severe attack, extreme swelling of surface.

Solvent Resistance 1, 1, 1 - Trichloroethane 1month	A	View

Environmental Condition: 24hr @ RT + 2hr @ 160F(71C) + 1, 1, 1 - Trichloroethane 1mo

Notes: Cured OLS samples immersed in solvent and after dwell, examined for surface attack compared to control. A: Unaffected, no color or texture change B: Slight attack, slight swelling of surface. C: Moderate/severe attack, extreme swelling of surface.

Solvent Resistance RMA Flux 1hr	A	View

Environmental Condition: 24hr @ RT + 2hr @ 160F(71C) + RMA Flux 1hr

Notes: Cured OLS samples immersed in solvent and after dwell, examined for surface attack compared to control. A: Unaffected, no color or texture change B: Slight attack, slight swelling of surface. C: Moderate/severe attack, extreme swelling of surface.

Solvent Resistance RMA Flux 1month	A	View

Environmental Condition: 24hr @ RT + 2hr @ 160F(71C) + RMA Flux 1mo

Notes: Cured OLS samples immersed in solvent and after dwell, examined for surface attack compared to control. A: Unaffected, no color or texture change B: Slight attack, slight swelling of surface. C: Moderate/severe attack, extreme swelling of surface.

Typical Cured Characteristics

Property	Values	Additional Information
Shore D Hardness	67	View

Test Method: ASTM D2240

Temp C: 23C
Temp F: 73F

Tensile Strength	1850 lb/in²	View

Test Method: ASTM D882

Dwell/Cure Time: 2.0
Dwell Time Units: hr
Temp C: 23C
Temp F: 72F
Environmental Condition: +2 hr @ 160F(71C)

Notes: Samples were 2 in. dumbbells with 0.125 in. neck and .030 in. sample thickness. Separation rate was 2 inches per minute.

Weight Loss by Thermal Gravimetric Analysis (TGA)	1 %	View

Test Method: ASTM E1131

Temp C: 116C
Temp F: 241F

Notes: Weight loss by Thermal Gravimetric Analysis reported as that temperature at which 5% weight loss occurs by TGA in air at 5°C (9°F) rise per minute.

Thermal Shock Resistance	Pass 5 cycles without cracking	View

Test Method: 3M C3174

Test Condition: Potted Washer Olyphant Test, 100°C [air] to -50°C [liquid]

Notes: Involves potting a metal washer into a 2 in. x 0.5 in. thick section and cycling this test specimen to colder and colder temperatures.

Weight Loss by Thermal Gravimetric Analysis (TGA)	318 °C	View

Test Method: ASTM E1131

Notes: Weight loss by Thermal Gravimetric Analysis reported as that temperature at which 5% weight loss occurs by TGA in air at 5°C (9°F) rise per minute.

Weight Loss by Thermal Gravimetric Analysis (TGA)	604 F	View

Test Method: ASTM E1131

Notes: Weight loss by Thermal Gravimetric Analysis reported as that temperature at which 5% weight loss occurs by TGA in air at 5°C (9°F) rise per minute.

3M™ EPX™ Pneumatic Applicator Delivery Rates

Property	Values	Additional Information
Pneumatic Applicator Delivery Rates	54 g/min	View

Test Condition: 400 ml Applicator – Maximum Pressure 73 psi.

Notes: Tests were run at a temperature of 70°F ± 2°F (21°C ± 1°C) and at maximum applicator pressure.

Pneumatic Applicator Delivery Rates	206.5 g/min	View

Test Condition: 400 ml Applicator – Maximum Pressure 73 psi.

Notes: Tests were run at a temperature of 70°F ± 2°F (21°C ± 1°C) and at maximum applicator pressure.

Pneumatic Applicator Delivery Rates	45.7 g/min	View

Test Condition: 200 ml Applicator – Maximum Pressure 58 psi.

Notes: Tests were run at a temperature of 70°F ± 2°F (21°C ± 1°C) and at maximum applicator pressure.

Pneumatic Applicator Delivery Rates	179 g/min	View

Test Condition: 200 ml Applicator – Maximum Pressure 58 psi.

Notes: Tests were run at a temperature of 70°F ± 2°F (21°C ± 1°C) and at maximum applicator pressure.

Pneumatic Applicator Delivery Rates	60 g/min	View

Test Condition: 48.5/50 ml Applicator – Maximum Pressure 50 psi.

Notes: Tests were run at a temperature of 70°F ± 2°F (21°C ± 1°C) and at maximum applicator pressure.

Electrical and Thermal Properties

Property	Values	Additional Information
Glass Transition Temperature (Tg)	29 °C	View

Test Condition: Mid-Point

Notes: Glass Transition Temperature (Tg) determined using DSC Analyzer with a heating rate of 68°F (20°C) per minute. Second heat values given.

Glass Transition Temperature (Tg)	84 °F	View

Test Condition: Mid-Point

Notes: Glass Transition Temperature (Tg) determined using DSC Analyzer with a heating rate of 68°F (20°C) per minute. Second heat values given.

Glass Transition Temperature (Tg)	23 °C	View

Test Condition: Onset

Notes: Glass Transition Temperature (Tg) determined using DSC Analyzer with a heating rate of 68°F (20°C) per minute. Second heat values given.

Glass Transition Temperature (Tg)	73 °F	View

Test Condition: Onset

Notes: Glass Transition Temperature (Tg) determined using DSC Analyzer with a heating rate of 68°F (20°C) per minute. Second heat values given.

Dielectric Constant 1KHz	6.6	View

Test Method: ASTM D150

Temp C: 23C
Temp F: 72F
Test Condition: 1 KHz

Dissipation Factor 1KHz	0.06	View

Test Method: ASTM D150

Temp C: 23C
Temp F: 72F
Test Condition: 1 KHz

Thermal Conductivity	.32 x10^-3 Cal/s/cm/°C	View

Test Method: C177

Temp F: 110F

Notes: Thermal conductivity determined using C-matic Instrument using 2 in. diameter samples.

Thermal Conductivity	13.3 W/m/K	View

Test Method: C177

Temp F: 110F

Notes: Thermal conductivity determined using C-matic Instrument using 2 in. diameter samples.

Thermal Conductivity	0.077 (btu-ft)/(h-ft²-°F)	View

Test Method: C177

Temp F: 110F

Notes: Thermal conductivity determined using C-matic Instrument using 2 in. diameter samples.

Volume Resistivity	6.7 x 10^11 Ω-cm	View

Test Method: ASTM D257

Temp C: 23C
Temp F: 73F

Coefficient of Thermal Expansion	93 x 10^-6 m/m/°C	View

Test Condition: 5-20°C range

Notes: TCE determined using TMA Analyzer using a heating rate of 10°C per minute. Second heat values given.

Coefficient of Thermal Expansion	182 x 10^-6 m/m/°C	View

Test Condition: 40-140°C range

Notes: TCE determined using TMA Analyzer using a heating rate of 10°C per minute. Second heat values given.

Storage and Shelf Life

Store 3M™ Scotch-Weld™ Epoxy Adhesive DP100 Plus Clear at 60-80°F (15-27°C) for maximum shelf life.
These epoxy adhesive products have a shelf life of 24 months in their unopened containers. Product shelf life is based on date of manufacture.

Industry Specifications

UL 94 HB

Automotive Disclaimer

Automotive Applications: This product is an industrial product and has not been designed or tested for use in certain automotive applications, including, but not limited to, automotive electric powertrain battery or high voltage applications. This product does not fully adhere to typical automotive design or quality system requirements, such as IATF 16949 or VDA 6.3. This product may not be manufactured in an IATF certified facility and may not meet a Ppk of 1.33 for all properties. The product may not undergo an automotive production part approval process (PPAP). Customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's automotive application and for conducting incoming inspections before use of the product. Failure to do so may result in injury, death, and/or harm to property. No written or verbal statement, report, data or recommendation by 3M related to automotive use of the product shall have any force or effect unless in an agreement signed by the Technical Director of 3M's Automotive Division. Customer assumes all responsibility and risk if customer chooses to use this product in an automotive electric powertrain battery or high voltage application, and 3M will not be liable for any loss or damage arising from or related to the 3M product or customer's use of the product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity or recall costs), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability. In no event shall 3M be liable for any damages in excess of the purchase price paid for the product.
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Trademarks

3M and Scotch-Weld are trademarks of 3M Company.

Handling/Application Information

Application Equipment

For small or intermittent applications, the 3M™ EPX™ Applicator is a convenient method of application.

For larger applications, these products may be applied by use of flow equipment.

Two-part meter/mixing/dispensing equipment is available for intermittent or production line use. These systems may be desirable because of their variable shot size and flow rate characteristics and are adaptable to many applications.

Directions for Use

1. For high strength structural bonds, paint, oxide films, oils, dust, mold release agents and all other surface contaminants must be completely removed. However, the amount of surface preparation depends on the required bond strength and the environmental aging resistance desired by user. For specific surface preparations on common substrates, see the section on surface preparation.

2. Use gloves to minimize skin contact. Do not use solvents for cleaning hands.

3. Mixing

For Duo-Pak Cartridges

3M™ Scotch-Weld™ Epoxy Adhesive DP100 Plus Clear is supplied in a dual syringe plastic duo-pak cartridge as part of the 3M™ EPX™ Applicator System. To use, simply insert the duo-pak cartridge into the EPX applicator and start the plunger into the cylinders using light pressure on the trigger. Next, remove the duo- pak cartridge cap and expel a small amount of adhesive to ensure both sides of the duo-pak cartridge are flowing evenly and freely. If automatic mixing of Part A and Part B is desired, attach the EPX applicator mixing nozzle to the duo-pak cartridge and begin dispensing the adhesive. For hand mixing, expel the desired amount of adhesive and mix thoroughly. Mix approximately 15 seconds after uniform color is obtained.

For Bulk Containers

Mix thoroughly by weight or volume in the proportions specified in the typical uncured properties section. Mix approximately 15 seconds after uniform color is obtained.

4. For maximum bond strength, apply adhesive evenly to both surfaces to be joined.

5. Application to the substrates should be made within 3 minutes. Larger quantities and/or higher temperatures will reduce this working time.

6. Join the adhesive coated surfaces and allow to cure at 60°F (16°C) or above until completely firm. Heat up to 200°F (93°C), in order to speed curing. These products will cure in 48 hours @ 75°F (24°C).

7. Keep parts from moving during cure. Contact pressure necessary. Maximum shear strength is obtained with a 3-5 mil bond line.

8. Excess uncured adhesive can be cleaned up with methyl ethyl ketone (MEK).*

Adhesive Coverage: A 0.005 in thick bond line will yield a coverage of 320 sqft/gallon.

*Note: When using solvents, extinguish all ignition sources, including pilot lights, and follow manufacturer's precautions and directions for use.

Surface Preparation

For high strength structural bonds, paint, oxide films, oils, dust, mold release agents and all other surface contaminants must be completely removed. However, the amount of surface preparation directly depends on the required bond strength and the environmental aging resistance desired by user.

The following cleaning methods are suggested for common surfaces:

Steel:

1. Wipe free of dust with oil-free solvent such as acetone, isopropyl or alcohol solvents.*

2. Sandblast or abrade using clean fine grit abrasives.

3. Wipe again with solvent to remove loose particles.

4. If a primer is used, it should be applied within 4 hours after surface preparation.

Aluminum:

1. Alkaline Degrease: Oakite 164 solution (9-11 oz./gallon water) at 190°F ± 10°F (88°C ± 5°C) for 10-20 minutes. Rinse immediately in large quantities of cold running water.

2. Acid Etch: Place panels in the following solution for 10 minutes at 150°F ± 5°F (66°C ± 2°C).

Sodium Dichromate 4.1 - 4.9 oz./gallon

Sulfuric Acid, 66°Be 38.5 - 41.5 oz./gallon 2024-T3 aluminum (dissolved) 0.2 oz./gallon minimum

Tap water as needed to balance

3. Rinse: Rinse panels in clear running tap water.

4. Dry: Air dry 15 minutes; force dry 10 minutes at 190°F ± 10°F (88°C ± 5°C).

5. If primer is to be used, it should be applied within 4 hours after surface preparation.

Note: Read and follow component supplier's environmental health and safety information prior to preparing this etch solution.

Plastics/Rubber:

1. Wipe with isopropyl alcohol.*

2. Abrade using fine grit abrasives.

3. Wipe with isopropyl alcohol.*

Glass:

1. Solvent wipe surface using acetone or MEK.*

*Note: When using solvents, extinguish all ignition sources, including pilot lights, and follow manufacturer's precautions and directions for use.

References

Property	Values
3m.com Product Page	https://www.3m.com/3M/en_US/p/d/b40066487/
Safety Data Sheet SDS	https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=DP100 Plus Clear

Family Group

Link Tags:

DP100 Plus Clear

Products	Color	Worklife	Set Time (min)	Time to Handling Strength
DP100 Plus Clear	Clear	3 to 4 min	20 min	20 hr

ISO Statement

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001 standards.

Precautionary Information

Refer to Product Label and Material Safety Data Sheet for health and safety information before using this product. For additional health and safety information, call 1-800-364-3577 or (651) 737-6501.

Information

Technical Information: The technical information, guidance, and other statements contained in this document or otherwise provided by 3M are based upon records, tests, or experience that 3M believes to be reliable, but the accuracy, completeness, and representative nature of such information is not guaranteed. Such information is intended for people with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license under any 3M or third party intellectual property rights is granted or implied with this information.

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