

**3M** Science.  
Applied to Life.™

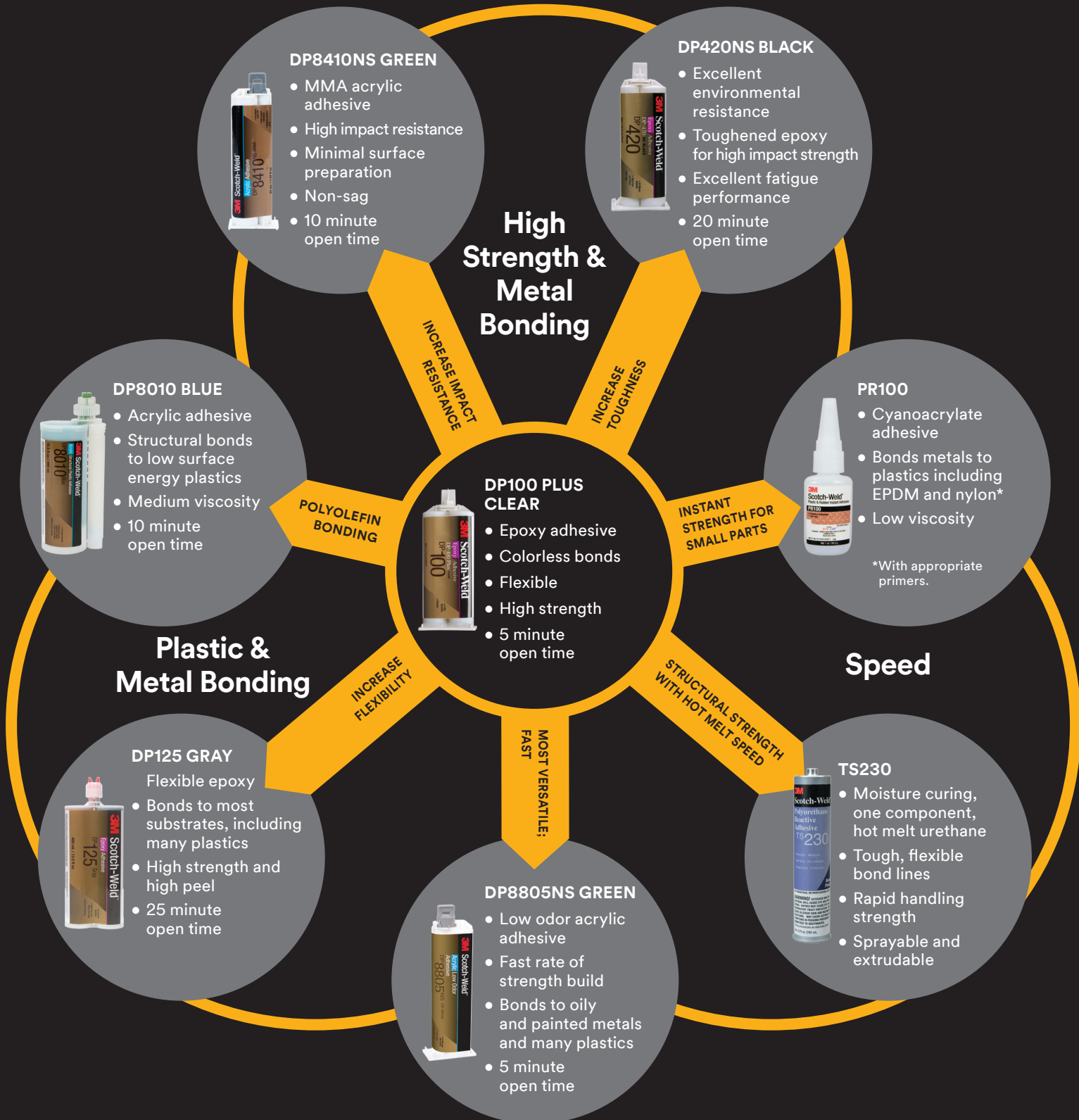


# 3M™ Scotch-Weld™ Structural Adhesive Solutions

for Design, Process  
and Performance

# 3M™ Scotch-Weld™ Structural Adhesives

## Adhesive Science for Bonding Solutions





# Design Solutions

## Improve Aesthetics

- Replace rivets, welds and screws
- Invisible joints
- Create smoother bond lines

### *Producing a seamless appearance*



Recommended 3M products:  
**DP100 PLUS & DP420NS**

## Lightweighting

- Eliminate the weight of mechanical fasteners
- Use thinner, lighter materials
- Build with composites and hard-to-bond plastics

### *Making products lighter and more efficient*



Recommended 3M products:  
**DP8010 & DP420NS**

## Freedom to Design

- Adhere difficult-to-bond materials, such as HDPE/PP
- Bond multiple materials, such as metal to plastic
- Smaller joints take up less space

### *Extending your design latitude*



Recommended 3M products:  
**DP8010 & DP8805NS**

# Process Efficiencies

## Cost-Efficient

- Reduce labor costs
- Use thinner materials to decrease costs
- Eliminate post-finishing

## Enhance Productivity

- Variety of cure rates to match your process needs
- Build faster with minimal surface prep
- Withstands high process temperatures

## Accurate and Easy

- Control dispensing with 3M™ EPX™ exact proportioning and mixing applicators
- Match your processing needs with a range of viscosities and flow rates
- Handle large applications with bulk meter-mix equipment

### *Saving both time and money*

#### Adhesive vs Bolt

1" x 24" Application  
97% Weight Reduction  
22% Cost Reduction

1" X 24" BEAD OF ADHESIVE

STANDARD BOLTS 6" APART

Weights  
**4 grams**  
and costs  
**\$0.97**

Weights  
**125 grams**  
and costs  
**\$1.27**  
(5 bolts with nuts)

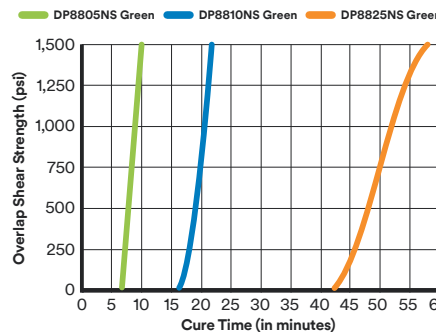
**10% = 6-7%**  
weight reduction fuel savings

weld cost  
**\$3.24**  
per foot

adhesive cost  
**\$2.27**  
per foot

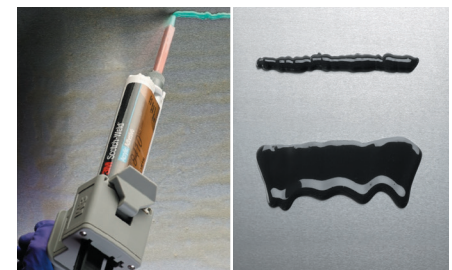


**Structural Acrylic Adhesives** — with various open times and exceptionally fast cure rates allow you to move your parts faster.



Recommended 3M products:  
**DP8410NS & DP420NS BLACK**

### *Eliminating hand mixing*



Recommended 3M products:  
**TS230 & DP8805NS**



# Performance Optimization



## Stronger Bonds

- Eliminate stress concentrations
- Toughened adhesives absorb shock for durable bonds
- Bond and seal simultaneously

## Flexible Bonds

- Absorb vibration and CTE mismatch\*
- Reduce NVH (noise vibration harshness)
- Resist material separation along edges and corners with high peel strength

## Quality & Durability

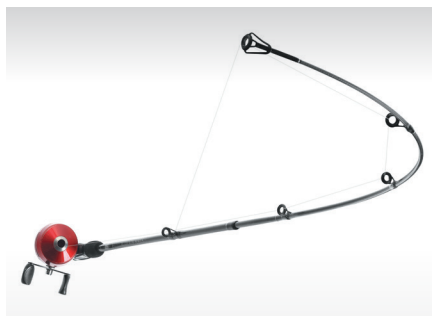
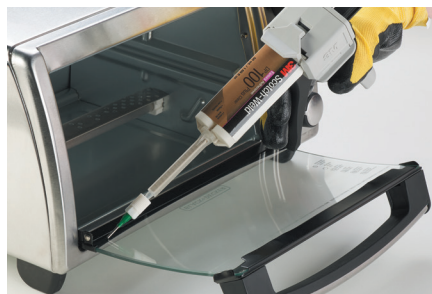
- Improve vibration and fatigue resistance
- Environmental and chemical resistance
- Eliminate galvanic corrosion

### *Providing solutions for high-strength applications*



Recommended 3M products:  
**DP420NS & DP8410NS**

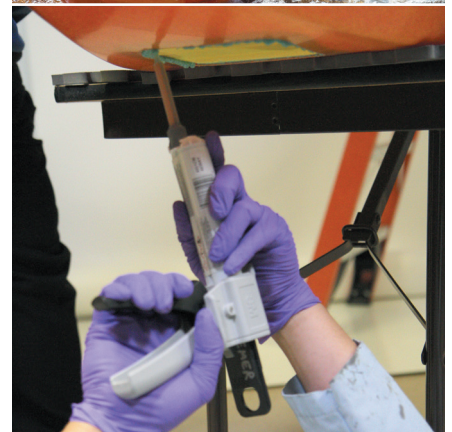
### *Enhancing durability in tough environments*



\*Coefficient of thermal expansion.

Recommended 3M products:  
**DP125 & DP100PLUS**

### *Bonds that last under harsh conditions*



Recommended 3M products:  
**DP8410NS & DP8010 BLUE**

# 3M™ Scotch-Weld™ Structural Adhesive "Lead" Products

Product (Color)	Key Features	Mix Ratio (Volume) B:A	Approximate Viscosity at 75°F (24°C) (cp)	Open Time (Work Life)	Set Time	Approximate Time to Handling Strength at 75°F (24°C)	Floating Roller (Ball Peel) at 75°F (24°C)				Overlap Shear (psi)		Long Term Temperature Range	Size	UPC	Stock #
							-67°F (-55°C)	75°F (24°C)	180°F (82°C)	200°F (93°C)	-67F - 325F	180°F (82°C)				
DP100 Plus 100 Plus (Clear)	Flexible bonds Colorless	1:1	8,500	4 minutes	N/A	20 minute	55	3,000	3,500	200	-67F - 325F	50ml 200ml 400ml 5 gal. pail B 5 gal. pail A	00-021200-87195-5 00-021200-87266-2 00-021200-87267-9 00-021200-87197-9 00-021200-87198-6	62-3272-1435-9 62-3272-3830-9 62-3272-3530-5 62-3272-8530-0 62-3372-8530-8		
DP125 125 (Gray)	High performance Flexible bonds	1:1	52,500	25 minutes	N/A	2.5 hours	85	3,400	4,300	400	-67F - 325F	50ml 200ml 400ml 5 gal. pail B 5 gal. pail A	00-002100-87211-2 00-002100-87842-8 00-002100-87843-5 00-002100-87217-4 00-002100-87218-1	63-3291-1435-9 62-3291-3830-9 62-3291-3530-5 62-3293-8530-6 62-3393-8530-4		
DP420NS 420NS (Black)	Tough durable bonds Non-sag	2:1	180,000	20 minutes	N/A	2 hours	60	4,500	4,500	1,250	-67F - 350F	37ml 200ml 400ml 5 gal. pail B 5 gal. pail A 55 gal. drum B 55 gal. drum A	00-021200-39285-6 00-021200-39286-3 00-021200-39287-0 00-021200-56587-8 00-021200-31309-7 00-048011-58132-3 00-048011-58133-0	62-3299-1435-2 62-3299-3832-8 62-3299-3532-4 62-3299-8535-2 62-3399-8530-1 62-3299-9530-2 62-3399-9530-0		
DP8010 8010 Blue	Bonds polyolefins and low surface energy materials	10:1	20,000	10 minutes	N/A	1 hour		2,700	2,700	500	-67F - 250F	45ml 490ml 1 gallon A 5 gal. pail B 5 gal. pail A 55 gal. drum B	00-051115-71600-3 00-051115-71601-0 00-021200-49113-9 00-051115-71669-0 00-021200-49115-3 00-051115-81460-0	62-2863-1445-5 62-2863-3630-0 62-2883-7530-6 62-2863-8530-7 62-2883-8530-5 62-2863-9530-6		
DP8805NS 8805NS (Green)	Low odor Fast rate of strength build	10:1	80,000	5 minutes	N/A	10 minutes	30		3,600	900	-20F - 280F	45ml 490ml 5 gal. pail of Part B 55 gal. drum of Part B A3-2 Accelerator 1 gal. can A3-2 Accelerator 5 gal. pail	00-051115-68958-1 00-051115-68959-8 00-051115-68979-6 00-051115-68984-0 00-051115-81415-0 00-051115-81414-3	62-2852-1445-8 62-2852-3630-3 62-2852-8530-0 62-2852-9530-9 62-2962-7530-8 62-2962-8530-7		
DP8410NS 8410NS (Green)	High impact Adhesion to most plastics	10:1	70,000	10 minutes	N/A	25 minutes	50		4,100	800	-40F - 280F	45ml 490ml 5 gal. pail of Part B 55 gal. drum of Part B A3-1 Accelerator 1 gal. can A3-1 Accelerator 5 gal. pail	00-051115-70994-4 00-051115-70995-1 00-051115-70997-5 00-051115-71101-5 00-051115-68981-9 00-051115-68980-2	62-2860-1445-1 62-2860-3630-6 62-2860-8530-3 62-2860-9530-2 62-2952-7530-9 62-2952-8530-8		
PR100 (Clear)	General purpose, low viscosity plastic and rubber bonder	N/A	100	N/A	10-30 seconds	N/A	N/A				-65F - 180F (-54 - 82C)	20 gram bottle 500 gram bottle 1 lb. bottle 2 kilo bottle	00-051115-25214-3 00-051115-25939-5 00-051115-25213-6 00-051111-07176-2	62-6164-0360-6 62-6164-3865-1 62-6164-3860-2 62-6164-6860-9		
Product (Color)	Key Features	Mix Ratio (Volume) B:A	Approximate Viscosity at 250°F (121°C) (cp)	Open Time (Work Life)	Set Time	Durometer (Shore D)	Tensile Strength	Elongation	Size	UPC	Stock #					
TS230 (Off White)	Sprayable/extrudable with long set time. Bonds a variety of plastics including polystyrene, aluminum, glass and wood.	N/A	9,000	4 minutes	150 seconds	45	3,300 psi	700%	1/10 of gal. cart. 2 kilo bag (4.4 lbs) 5 gal. pail 55 gal. drum	0-00-51115-25165-8 0-00-48011-53271-4 0-00-21200-83640-4 0-00-21200-83639-8	62-3870-5238-4 62-3870-6839-8 62-3870-8530-1 62-3870-9530-0					

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## Industrial Adhesives & Tapes Division

3M Center  
Building 225-35-06  
St. Paul, MN 55144-1000  
1-800-362-3550  
www.3M.com/structuraladhesives

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