



# Scotch-Weld™ DP 420/ DP 420NS

## Product Data Sheet

Date: April 2019  
Supersedes: NEW

### Product Description

3M™ Scotch-Weld™ Epoxy Adhesives are high performance, two-part epoxy adhesives offering good shear and peel adhesion.

### Key Features

- good shear strength
- good peel strength
- easy mixing
- 20-minute work life

### Typical Uncured Properties

	Base (Part B)		Accelerator (Part A)	
	DP 420	DP 420NS	DP 420	DP 420NS
Base Resin	Epoxy		Amine	
Colour	Black		Amber	
Mix Ratio - by volume - by weight	2 2		1 0,97	
Viscosity at 23°C	15000 -50000 mPas	190000 - 275000 mPas	6000 -14000 mPas	65000 - 135000 mPas
Density	0,94 g/cm <sup>3</sup>	0,95 g/cm <sup>3</sup>	0,92 g/cm <sup>3</sup>	0,92 g/cm <sup>3</sup>
<b>Mixed Adhesive</b>				
Work Life	Minutes	15 (for 20 g)		

### Typical Cured Properties

	DP 420	DP 420NS
Colour	Black	
Cure Time	7 Days at RT, 2 hrs. @ +70 °C	

**Performance Characteristics    Dynamic Shear**

*Cured at RT, curing time: 7 Days at RT, tested at RT*

Surface	Test Method & Unit	DP 420	DP 420NS
Steel DD11	DIN EN 1465 MPa	24,52 AF	25,03 AF
Aluminium AlMg3		19,50 AF	16,34 AF
PVC		2,25 AF	3,59 SF
Polyester		5,21 SF	5,30 SF
ABS		1,04 AF	2,46 AF

*Cured at RT, reconditioning: 24 h RT tested at RT on Steel DD11*

Aging	Unit	DP 420	DP 420NS
30 days Salt spray <i>DIN EN ISO 9227</i>	MPa	19,66 AF	19,15 AF
30 Days condensing humidity <i>DIN EN ISO 6270-2</i>		19,91 AF	19,45 AF
30 Days MEK		20,15 AF	20,90 AF
30 Days Isopropanol		25,17 AF	26,48 AF

**Test preparation for Dynamic Overlap Shear**

*The samples were measured on 25 mm wide and 13 mm overlap specimen. These bonds were made individually using 25 mm x 100 mm x 2 mm pieces of substrate.*

*The thickness of the bond line was 0,1 till 0,2 mm.*

*The separation rate of the Testing jaws was 2,5 mm/min.*

**Dynamic Peel**

*Cured at RT, curing time: 7 Days at RT, tested at RT*

Dynamic Peel (Floating Roller Method)	Test Method & Unit	DP 420	DP 420NS
Aluminium 2024T	DIN EN 1464 N/cm	44,65 AF	37,62 AF

**Test preparation for Dynamic Peel**

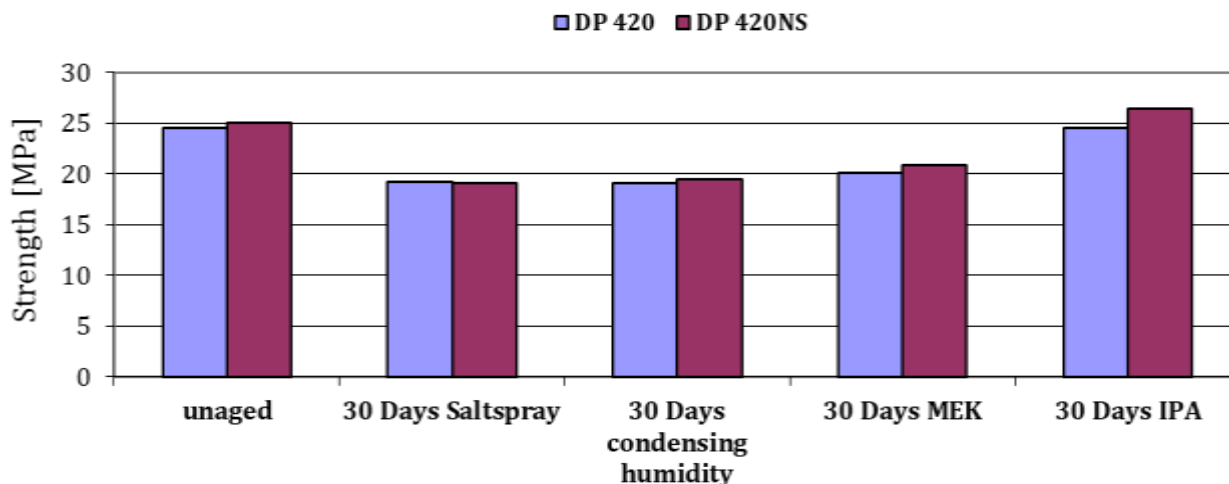
*The thickness of the flexible joining part was (0.5 ± 0.02) mm and that of the rigid joining part (2.5 ± 0.1) mm.*

*The thickness of the bond line was 0,1 till 0,2 mm.*

*The separation rate of the Testing jaws was 100 mm/min.*

**Failure mode:** CF: Cohesion Failure  
SF: Surface Failure  
AF: Adhesion Failure

## Dynamic Shear DIN EN 1465 on Steel



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### Storage & Shelf Life

Store at 16 °C - 25 °C and 40-65 % relative humidity in its original box.  
The product can be stored up to 24 months after date of production.

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### Precautionary Information

Refer to product label and Material Safety Data Sheet for health and safety information before using the product.  
For information please contact your local 3M Office.  
<http://www.3M.fi/teollisuus>

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### For Additional Information

To request additional product information or to arrange for sales assistance, call: Suomen 3M Oy / Teollisuustuotteet, 09 525 21.  
Address correspondence to: PL 600 / Keilaranta 6, 02151 Espoo.

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### Important Notice

All statements, technical information and recommendations contained in this document are based upon tests or experience that 3M believes are reliable. However, many factors beyond 3M's control can affect the use and performance of a 3M product in an application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method or application. All questions of liability relating to this product are governed by the terms of the sale subject, where applicable, to the prevailing law.

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Values presented have been determined by standard test methods and are average values not to be used for specification purposes. Our recommendations on the use of our products are based on tests believed to be reliable but we would ask that you conduct your own tests to determine their suitability for your applications. This is because 3M cannot accept any responsibility or liability direct or consequential for loss or damage caused as a result of our recommendations.

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