SNAPSHOOT
ENGINEERED FOR A SAFER TOMORROW

현장을 이해하고, 필요한 솔루션을 연결합니다.

산업안전 · 추락방지 시스템
산업용 소재 · 건축자재
제품 제안부터 공급·시공·설치·교육까지



COMPANY INFORMATION

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TECHNICAL DOCUMENTS

인증서 · 데이터시트 · 기술자료

제품의 규격과 성능, 인증 및 적용 조건을 확인하기 위한 자료입니다.

ABOUT SNAPSHOOT

제품 공급을 넘어, 현장에 맞는 해결책으로

스냅슛은 산업현장의 작업 환경과 요구 조건을 바탕으로
적합한 제품과 시스템을 제안합니다. 현장 실사를 통해 설치 조건을 확인하고,
공급부터 시공·설치 및 사용 교육까지 필요한 과정을 함께합니다.

추락방지 시스템

안전대부착설비 · 수평·수직 라이프라인
레일 시스템 · 리지드 포스트

밀폐공간 진입·구조 솔루션

데빗암 · 삼각대 · 구조용 윈치
윈치 안전블록 · 구조장비

산업안전 보호구

전신형 안전대 · 랜야드 · 안전블록
작업 환경에 맞춘 개인보호구

산업용 소재·건축자재

산업용 테이프 · 접착제 · 기능성 소재
구조용 스크류 · 목조건축 자재

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홈페이지 바로가기 →
문서 라이브러리 바로가기 →
시공사례 바로가기 →
문의하기 →

본 페이지는 스냅슛의 자료 제공 안내용 표지입니다. 첨부된 인증서 및 기술자료의 발행 주체, 인증 대상과 적용 범위는 해당 원문을 기준으로 확인해 주세요.

3M™ Scotch-Weld™ EC-9323-2 B/A

Two Part Structural Adhesive

Product Description

3M™ Scotch-Weld™ Structural Epoxy Adhesive EC-9323-2 B/A is a thixotropic, sag-resistant, two component epoxy paste adhesive which cures at room temperature or with mild heat to form a tough, impact resistant structural bond. It has an excellent adhesion to a wide variety of substrates such as metals, glass, ceramics and plastics, incl. GFRP and CFRP. Once cured it provides very high shear and peel strength over a wide temperature range, with excellent resistance to harsh environments and chemicals commonly encountered in aerospace applications. Typical applications are aircraft interior panel bonding, ditch and pot, insert, or bracket bonding. The product is available in a white and a black version.

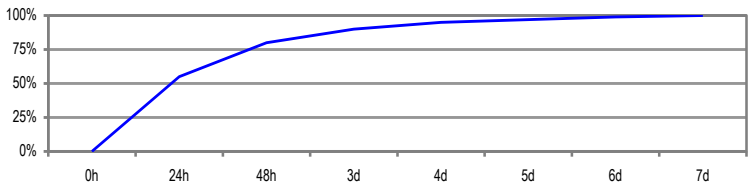


Key Features

- Thixotropic, non-sag, full room temperature processable,
- Available in duo-pack cartridge for easy and best processing.
- Toughened system providing very high shear and peel strength
- Excellent environmental resistance

Product Characterization

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

General Properties		Part B	Part A
Colour	SW EC- 9323-2 B/A white	White	Off-white
	SW EC- 9323-2 B/A black	Black	Off-white
Base		Modified epoxy	Modified amine
Consistency		Thixotropic paste	Thixotropic paste
Density		1.04 g / cm³	1.03 g / cm³
Solids		100 %	100 %
Viscosity [a]		250 Pas	75 Pas
Mix ratio by weight (by volume)		100 : 50 wt. (100 : 50 vol.)	
Work life [b] and open time at 23 ± 2 °C		> 120 minutes	
Handling strength[c]		4 hours	
Strength build-up at 23 ± 2 °C			
Full cure cycle		7 days at room temperature	
Packaging		Cans, cartridges and pails	

[a] *Brookfield RVF Spindle 7, 2 rpm* [b] *50 g of mixed adhesive* [c] *Time to reach 1 MPa Shear Strength*

Product Performance

The following data show typical values obtained with Scotch-Weld™ EC-9323-2 B/A on unprimed, sulfochromic etched, 2024 T3 aluminium. The samples have been cured for 7 days at room temperature, if not stated otherwise. To control the bond line thickness, approximately 1 wt. % of glass beads, 90 – 150 µm diameter were added to the adhesive.

Mechanical Properties		Test Temperature	Cured for 7 days at 23 °C	Cured for 2 hours at 65 °C
Overlap Shear Strength EN 2243-1		-55 °C	24 MPa	26 MPa
		23 °C	29 MPa	30 MPa
		80 °C	10 MPa	12 MPa
		120 °C	3 MPa	3 MPa
		150 °C	2 MPa	-
Overlap Shear Strength EN 2243-1	Stainless steel	23 °C	-	26 MPa
	CFRP, GFRP epoxy matrix resin	23 °C	-	30 MPa [(d)]
	PMMA	23 °C	-	3 MPa [(d)]
	ABS	23 °C		4 MPa [(d)]
Floating Roller Peel Strength EN 2243-2		23 °C	219 N / 25 mm	159 N / 25 mm
		80 °C	140 N / 25 mm	-
Impact Resistance AFNOR NF 76-115		23 °C	22,6 kJ / m²	25,3 kJ / m²

[(d)] Substrate Failure

Environmental Ageing

The following data show typical values obtained with Scotch-Weld EC-9323-2 B/A after 750 hours exposure to different media and environments to determine the aging resistance. The samples have been cured for 15 days at room temperature.

Mechanical Properties	Environment	Test Temperature	Results
Overlap Shear Strength EN 2243-1	Demineralized water at 23 ± 2 °C	23 °C	27 MPa
	Gasoline super at 23 ± 2 °C	23 °C	28 MPa
	Engine oil (20W40) 23 ± 2 °C	23 °C	30 MPa
	Hydraulic fluid skydrol 500B at 23 ± 2 °C	23 °C	29 MPa
	JP4 fluid at 23 ± 2 °C	23 °C	29 MPa
	5 % Salt spray at 23 ± 2 °C	23 °C	27 MPa
	Hot / Wet 50 °C, ≥ 95% R.H.	23 °C	23 MPa
	Dry heat at 120 ± 2 °C	23 °C	26 MPa

Handling, Application, Storage

Precautionary Information

Refer to product label and Material Safety Data Sheet (MSDS) for health and safety information before using this product. For MSDS visit our website www.3M.com/msds.

Instructions for use

While this information is provided as general application guideline based upon typical conditions, it is recognized that no two applications are identical due to, among other things, differing assemblies, methods of heat and pressure application, production equipment and other limitations. It is therefore suggested that experiments be run, within the actual constrains imposed to determine optimum conditions for your specific application and to determine suitability of product for particular intended use.

Process step	Instruction
Surface preparation	The strength and durability of a bonded joint are dependent on proper treatment of the surface to be bonded. An acclimated, thoroughly cleaned, dry, grease-free surface is essential for maximum performance. Cleaning methods which will produce a break free water film on metal surfaces are generally satisfactory. At the very least, joint surfaces should be cleaned with a good proprietary degreasing agent and mechanically abraded, e.g. with 3M Scotch-Brite™ 7447. Abrading should be followed by a second degreasing treatment, e.g. with 3M 08984 Adhesive Cleaner. Optimum processing temperature for substrates and adhesive is around room temperature of 23 °C.
Application	This product consists of two parts. Combine Part B and Part A in a separate container just prior to application in the proportions specified **Note:** Mix ratio deviations above +/- 5 % can have significant influence on material performance. Mix both components thoroughly until a uniform colour is obtained. **Important**: Be careful when mixing larger quantities, because exothermic reaction may occur. Dual cartridge applications provide maximum accuracy and easy handling. **Note**: When using a new static mixer, purge the first ml's until a uniform colour is obtained. Apply adhesive to parts to be bonded before the work life expires. **Note**: Work life depends to some extent on mixed quantity and the shape of the container. In order to obtain optimum mechanical performance, the joint components should be assembled and clamped as soon as the adhesive has been applied and before end of the open time. A fixation of the joint and an even contact pressure throughout the joint area during cure will ensure optimum performance. Maximum shear strength is obtained with 0.10 – 0.20 mm bond line thickness. Close the containers after use to protect the material against humidity. When using a duo-pack cartridge, keep the static mixer as cap.
Curing	Once mixed, Scotch-Weld™ EC-9323-2 B/A will gel in 3 hours, build up handling strength in 4 hours and fully cure within 7 days at room temperature. **Note:** Lower temperature will slow down the reaction times. Curing time can be accelerated by mild heat. Following times and temperatures will result in a full cure: ▪ 7 days at 23 ± 2 °C ▪ 2 hours at 65 ± 2 °C **Note:** The curing temperature may have influence on the final product performance.
Cleaning	Excess uncured adhesive can be cleaned with ketone type solvents. After cure the adhesive can be removed mechanically. **Note**: When using solvents, extinguish all ignition sources, including pilot lights, and follow the manufacturer's precautions and instructions for use.
Storage and Handling	Store the product at room temperature. Shelf life is minimum 12 months from date of shipment in the original unopened containers. The specific expiry date is mentioned on the product label.

Important notice: All statements, technical information and recommendations in this data sheet are based on tests 3M believes to be reliable, but the accuracy or completeness of those tests is not guaranteed. All technical data and information should be considered typical or representative only and should not be used for specification purposes. Given the variety of factors that affect the use and performance of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product before use to determine the suitability of the 3M product for the intended use and method of application. All questions of liability relating to the 3M product are governed by the terms of the sale subject to, where applicable, the prevailing law.

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