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 →

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Technical Data Sheet

3M™ Metal Primer 3901

English-US

Last Revision Date: October, 2024

Supersedes: September, 2024

Product Details

Regulatory Info/SDS

Product Description

3M™ Scotch-Weld™ Metal Primer 3901 is a primer for 3M™ Scotch-Weld™ film and liquid adhesives in those applications where it is desired to obtain improved metal and glass adhesion or improved resistance to environmental exposure with epoxy and urethane adhesives.

Product Features

- Ensures complete wetting of film adhesive to adherend surfaces.
- Simplifies production scheduling by protecting the cleaned surfaces until the bonding operations can be completed.
- Imparts improved corrosion protection to metal.

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

Attribute Name	Temperature	Value
Color		Red
Base		Synthetic Resin
Viscosity	27 °C (80 °F)	5 cP [1]
Net Weight		6.5 ± 0.2 lb/gal

[1] Brookfield, RVF, No. 1 spindle, 20 rpm

Typical Physical Properties

Attribute Name	Value
Solvent Resistance	Methyl Alcohol (Contains non-photochemically reactive solvent. Consult local air quality regulations which may regulate product use.)
Flash Point	16 °C (60 °F) [1]

[1] Closed Cup

Typical Performance Characteristics

Overlap Shear Strength

Temperature	Substrate	Value
23 °C (73 °F)	Titanium	5,280 lb/in²
23 °C (73 °F)	Stainless Steel	6,310 lb/in²
-55 °C (-67 °F)	Titanium	6,380 lb/in²
-55 °C (-67 °F)	Stainless Steel	10,203 lb/in²
82 °C (180 °F)	Titanium	3,650 lb/in²
82 °C (180 °F)	Stainless Steel	3,600 lb/in²

Handling/Application Information

Surface Preparation

Suggested Cleaning Procedure for 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. Optimized FPL Etch Solution (1 liter):
Material Amount
Distilled Water 700 ml plus balance of liter (see below)
Sodium Dichromate 28 to 67.3 grams
Sulfuric Acid 2 87.9 to 310.0 grams
Aluminum Chips 1.5 grams/liter of mixed solution

To prepare 1 liter of this solution, dissolve Sodium Dichromate in 700 ml of distilled water. Add sulfuric acid and mix well. Add additional distilled water to fill to 1 liter. Heat mixed solution to 66 to 71°C (150 to 160°F). Dissolve 1.5 grams of 2024 bare aluminum chips per liter of mixed solution. Gentle agitation will help aluminum dissolve in about 24 hours.

Place panels in FPL etch solution for 10 minutes at 155 ± 5°F (68 ± 2°C) for 12 to 15 minutes.

3. Rinse – Rinse panels in clear running water.
4. Dry – Air dry 15 minutes, force dry 10 minutes at 140°F (60°C) maximum.

Note: It is advisable to coat the freshly-cleaned surfaces with 3M™ Scotch-Weld™ Metal Primer 3901 within four (4) hours after surface preparation.
Care should be taken to avoid contaminating the cleaned aluminum by any substance which will hinder the wetting action of Scotch-Weld 3901.

Review and follow safety and precautionary recommendations from chemical supplier prior to preparing this etch solution.

Primer Application:
Scotch-Weld 3901 has been successfully applied by spraying and brushing. The following spray equipment is suggested to obtain optimum results:
Spray Gun DeVilbiss JGA
Air Cap No. 78
Needle-Nozzle AV-15-FX
Line Pressure 60-80 psi (4.1-5.5 bar)
Pot Pressure 1-2 psi (.07-.14 bar)
Distance from Panel 14 ± 3 inches (36 ± 8 cm)
Primer Thickness (dry) Less than .0001 inch (2.5 micron)

(**Note:**Only a micro-molecular layer of primer is required.)

Primer Dry:
The following dry cycle is suggested for 3M™ Scotch-Weld™ Metal Primer 3901:
Air Dry: Air dry at 75-85°F (24-33°C) for a minimum of one hour.
Force Dry: Circulating air oven 190°F (88°C) for 30 minutes.
Air dry cycles for periods as short as 1/2 hour have been used successfully with the force dry cycle. Humidity contributes greatly to satisfactory use of this primer. Relative humidity of 25% or lower may cause difficulties and should be thoroughly evaluated in the customer's application.

The primed surface, after cooling to ambient temperatures, is ready for adhesive bonding. The primed surface should be protected from contamination introduced by dust, fingerprints, oil, etc. Bonding should be completed within 7 days.

Primer Cleanup:
Excess primer and equipment may be cleaned up with ketone-type solvents.*

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

Application Techniques

A 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. Surface preparations should be fully evaluated with the adhesive, especially if resistance to specific environments are anticipated.

Storage and Shelf Life

Store under normal conditions of 16° to 27°C (60° to 80°F) in the original, unopened packaging, out of direct sunlight. For best performance, use this product within 18 months from date of manufacture.

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

Automotive Disclaimer

Select Automotive Applications:
This product is an industrial product and has not been designed or tested for use in certain automotive applications, such as automotive electric powertrain battery or high voltage applications, which may require the product to be manufactured in a IATF certified facility, meet a Ppk of 1.33 for all properties, undergo an automotive production part approval process (PPAP), or fully adhere to automotive design or quality system requirements (e.g., IATF 16949 or VDA 6.3). Customer assumes all responsibility and risk if customer chooses to use this product in these applications.

Information

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ISO Statement

This product was manufactured under a 3M quality system registered to ISO 9001 standards.

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