

Description

The 4229 *Connector Coating* is a solvent based, modified thermoplastic liquid coating used as a replacement for electrical tape and shrink wrap. It dries to a durable, flexible, moisture resistant, and rubber-like coating to protect exposed wires, metals, and plastics.

Applications & Usages

The 4229 insulates and protects electrical connections, valve handles, rope ends, battery terminals, tools, and sheet metal.

Benefits and Features

- **Meets ASTM E-96 moisture resistance**
- **Meets ASTM B-117 salt spray test**
- **Meets ASTM G53-84 accelerated 10 year weather test**
- **Highly flexible**
- **Will not chip or crack**
- **Good adhesion**
- **Suitable for use in food facilities as a non-food chemical**—certification available on request

Usage Parameters

<i>Properties</i>	<i>Value</i>
Tack Free	5 min
Recoat Time	20 min
Dry to Handle	4 h
Full Cure @25 °C [77 °F]	24 h
Shelf Life	3 y

Temperature Ranges

<i>Properties</i>	<i>Value</i>
Constant Service Temperature	-35 to 95 °C [-31 to 203 °F]
Storage Temperature ^{a)}	8 to 21 °C [46 to 70 °F]

a) The product should not be exposed to direct sunlight.

Chemical Components

Name	CAS Number
solvent naphtha (petroleum)	64742-89-8
n-hexane	110-54-3
xylene	1330-20-7
acetone	67-64-1
ethylbenzene	100-41-4
silica	112945-52-5
carbon black	1333-86-4

Properties of Cured 4229

<i>Physical Properties</i>	<i>Method</i>	<i>Value</i>
Color Moisture Resistant	Visual ASTM E-96	Black Excellent
<i>Mechanical Properties</i>	<i>Method</i>	<i>Value</i>
Hardness Elongation Tensile Strength	ISO 868 ISO 527-2 ISO 527-3	70 Shore A 450% 17.9 N/mm ² [2 590 lb/in ²]
<i>Electrical Properties</i>	<i>Method</i>	<i>Value</i>
Dielectric Breakdown Strength	IEC 60243-1	11.8 kV/mm [300 V/mil]

Properties of Uncured 4229

<i>Physical Properties</i>	<i>Method</i>	<i>Value</i>
Viscosity @25 °C [77 °F] Solids Content (w/w) Density Flash Point Odor	ASTM D93	3 970 mm ² /s 35% ±1% 0.83 g/mL -23 °C [9.4 °F] Aromatic hydrocarbon

Compatibility

Adhesion—The 4229 coating is not compatible with contaminants like water, oil, and greasy flux residues that may affect adhesion. If contamination is present on the substrate, clean the surface first.

Substrate Adherence Compatibility

- Metals
- Most plastics
- Glass
- Epoxy glass
- Glass
- Concrete
- Fabric
- Foam rubber
- Fiberglass
- Masonry
- Rubber
- Wood

It is always recommended to perform a compatibility test on a non-critical test area prior to large scale applications

Health, Safety, and Environmental Awareness

Please see the 4229-Liquid **Safety Data Sheet** (SDS) for more details on transportation, storage, handling and other security guidelines.

Environmental Impact: The 4229 formulation has a volatile organic compound content of 67% [556 g/L].

Health and Safety: The liquid is flammable and should be kept away from flames and other ignition sources. As with most paint materials, do not breathe in fumes. Solvents therein can cause irritation and other symptoms like headaches, pain, as well as having long term exposure effects.

Use in the open air, in fume hoods, or in well ventilated area. For short or long term (8 hours) at levels of exposures exceeding 100 ppm of xylene or ethyl benzene, use NIOSH approved respirator with organic vapor cartridges rated for this order of concentrations.

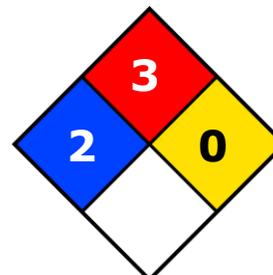
Wear safety glasses or goggles and disposable gloves to avoid exposures. Wash hands thoroughly after use.

The cured coating presents no known hazard.

HMIS® RATING

HEALTH:	*	2
FLAMMABILITY:		3
PHYSICAL HAZARD:		0
PERSONAL PROTECTION:		

NFPA® 704 CODES



Approximate HMIS and NFPA Risk Ratings Legend:

0 (Low or none); 1 (Slight); 2 (Moderate); 3 (Serious); 4 (Severe)

Application Instructions

The 4229 can be easily applied by dip, spray gun, or brush. Follow the procedure below for best results.

Prerequisites

- Ensure surface to be coated is clean: oil free, dust free, and rust free
- (Optional) Roughen surface with steel wool or fine abrasives to increase adhesion

To coat by dipping method

1. Hang or clamp object on a dipping arm.
2. Immerse object slowly.
3. Let dwell for 2 minutes to allow for penetration.
4. Withdraw slowly at approximately 2.5 cm per 5 seconds.
5. Wait at least 20 minutes at room temperature before recoat to avoid solvent entrapment.
6. Repeat steps 2 to 6 if higher thickness required.

To coat by spray gun method

Industrial airless or pressure pot gun is recommended for large applications. Do not use a Siphon gun.

Spray Setting Recommendation

Gun Type	Pressure
Airless gun	40 to 60 psi
Pressure pot gun	20 psi

1. At a distance of 25 to 30 cm (9.8 to 11.8 inches), spray a thin and even coat onto the part. For best results, use spray-and-release strokes with an even motion to avoid excess paint in one spot.
2. Wait at least 20 minutes at room temperature before recoat to avoid solvent entrapment.
3. Repeat steps 1 to 6 if higher thickness required.

NOTE: Applying 2 to 3 coats will give approximately 12 mil thickness.

To coat by brush method

1. Brush surface in one direction only.
2. Several coats are recommended. Wait at least 20 minutes at room temperature before recoat to avoid solvent entrapment.
3. Repeat steps 1 to 2 if higher thickness required.

ATTENTION: Using excessive coat thickness can cause defects.

To air dry the coating

- Let air dry 24 hours

Packaging and Supporting Products

Cat. No.	Packaging	Net Volume	Net Weight	Packaging Weight
4229-55ML	Bottle	55 mL 1.86 fl oz	45.6 g 1.61 oz	0.4 kg ^{a)} 0.8 lb ^{a)}
4229-1L	Can	945 mL 1.99 pt	784 g 1.72 lb	1.1 kg ^{a)} 2.5 lb ^{a)}
4229-4L	Can	3.78 L 1 gal	3.13 kg 6.91 lb	4.7 kg 10 lb

a) Case pack of 5



ISO 9001 Registered Quality System.
Burlington, Ontario, Canada QMI File # 004008

Connector Coating 4229 Technical Data Sheet

4229-Liquid

Technical Support

Contact us regarding any questions, improvement suggestions, or problems with this product. Application notes, instructions, and FAQs are located at www.mgchemicals.com.

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Warranty

M.G. Chemicals Ltd. warrants this product for 12 months from the date of purchase by the end user. *M.G. Chemicals Ltd.* makes no claims as to shelf life of this product for the warranty. The liability of *M.G. Chemicals Ltd.* whether based on its warranty, contracts, or otherwise shall in no case include incidental or consequential damage.

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