

# BONDERITE S-FN 8301 ACHESON DRYFILM COATING (KNOWN AS EMRALON 8301)

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**DESCRIPTION**

**BONDERITE S-FN 8301 ACHESON (known as EMRALON 8301)** is designed for lubricant applications where environmental regulations restrict emissions of VOC (Volatile Organic Compounds). **BONDERITE S-FN 8301 ACHESON (known as EMRALON 8301)** provides good wear, low coefficient of friction, solvent resistance, and resistance to chalking in UV exposure. After dip or spray application, **BONDERITE S-FN 8301 ACHESON (known as EMRALON 8301)** can be either air dried or forced dried with heat. This superior coating material offers lifetime lubrication for heat-sensitive substrates, complex machined precision steel parts, light metals (copper, aluminum), and some non-metallic materials.

**FEATURES**

- Air dry curing process
- Excellent adhesion to many substrates, including aluminum, plastics and steel
- Water based coating
- Remains flexible over a wide range of temperatures
- Good release properties with a low coefficient of friction

**BENEFITS**

- Energy and processing savings
- Minimal pre-treatment required to achieve coating adhesion, thereby reducing processing costs
- Environmentally and people friendly resulting in compliance and worker satisfaction
- Application for a variety of environmental performance requirements
- Ability to meet lubrication and assembly requirements for the component and application

**TYPICAL APPLICATIONS**

- Paper handling mechanisms
- Nylon parts
- Light load mechanisms
- O-rings
- General hardware

**TYPICAL PROPERTIES**

(of wet product)

Color:	whitish
Pigment:	PTFE
Binder:	thermoset polymer
Carrier:	water
Diluent:	water
Consistency:	liquid
Density:	1.07 kg/l (8.9 lb/gal)
Solids content by weight:	~ 25%
Flash point:	none, contains water
VOC:	325.0 g/l (2.7 lb/gal)
Theoretical coverage:	7.82 m <sup>2</sup> /kg @ 25 μm (340 ft <sup>2</sup> /gal @ 1 mil) dry film thickness

**TYPICAL PROPERTIES**

(as cured)

Color:	translucent
Coefficient of friction:	0.06 static



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Service temperature	
-continuous:	177°C (350°F)
Gloss:	60 – 65 @ 60° angle

## METHOD OF USE

### Surface Preparation

Substrates should be clean and dry. A chemical rinse or sandblast is usually sufficient to key the surface properly. However, if maximum adhesion is required, the combination of cleaning and surface pre-treatment by mechanical or chemical means is essential. Suggested methods of pre-treatment for maximum adhesion are as follows:

Steel	:	degrease, sand or vapor blast and/or phosphate coat
Stainless steel	:	degrease, sand or vapor blast
Copper alloys	:	degrease, sand or vapor blast, dilute nitric acid drip, water rinse
Aluminum	:	degrease, sand or vapor blast
Rubber	:	degrease, using appropriate solvent
Plastics	:	degrease, using appropriate solvent and/or light sanding

### Mixing

Stir to re-disperse solids that may have settled during storage. Avoid vigorous stirring which causes foaming. If dilution is necessary, blend four parts by weight **BONDERITE S-FN 8301 ACHESON (known as EMRALON 8301)** with one part by weight deionized water. If parts are to be dip coated, dilution may be necessary.

### Application

Use an external atomizing spray gun with 35 to 50 psi (2-4 metric atmospheres) air pressure and adjust the gun to give a well-atomized spray. For optimum performance, the final coating thickness should be 0.0003-0.0007 inches (8-18 microns). When properly applied, the coating will be even and free of runs, blisters, or "fish eyes." Close observation of color density will guide the experienced spray gun operator in obtaining even coverage.

### Spray

Spray at 40 psi with fluid adjustment screw open 1/3 of a turn. Four passes yield a dry film thickness of 0.3-0.5 mils. Do not let material dry at gun tip. Keep material circulating at all times to avoid settling.

### Dip

If coating thickness is too heavy when parts are coated at room temperature, dilute 10% with deionized water. If more than one coat is required, set coating 5 minutes at 93°C (200°F) between dips.

### Cleanup

Use water or alcohol/water blend. Dried coating may be cleaned with N-methyl-pyrrolidone.

### Drying

Product can be air dried within 1-3 hours. Forced drying 10 minutes at 93°-149°C (200°-300°F) is also possible.

## STORAGE/ HANDLING

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Shelf life for this product is 12 months from date of qualification under original seal. Do not store at temperatures above 35°C (95°F). Keep from freezing. Keep container tightly closed when not in use. Store in a cool, well ventilated area. Keep away from heat, sparks, and open flame. Protect material from direct sunlight. Ground and bond containers when transferring materials. Empty containers may retain hazardous properties. Follow all MSDS/label warnings even after container is emptied.

## APPLICATION ASSISTANCE

Henkel's Application Specialists are available to assist you in production start-up with **BONDERITE S-FN 8301 ACHESON (known as EMRALON 8301)**. Visit our website [www.henkelna.com/metals](http://www.henkelna.com/metals) for more information and for the Henkel global location nearest you.

## NOTES

See separate Material Safety Data Sheet for health and safety details.

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