

## Description

Republic N-79 is a neoprene polymer based material dispersed in a solvent which cures to a tough, durable, rubbery film. It is resistant to rain and erosion.

## Uses

- N-79 Neoprene Radome Coating is used to protect fiberglass laminate radome housings.

## Advantages

- N-79 provides excellent resistance to weathering, water, abrasion and salt spray for a long service life.
- A service temperature range of  $-45^{\circ}\text{F}$  to  $+225^{\circ}\text{F}$  allows expanded use under adverse temperature conditions.

## Surface Preparation

Remove any surface gloss from the laminate with a fine grade emery (180 grit or equivalent). Clean the surface thoroughly with diluent.

Stir the contents of the Republic N-15 Primer can and apply one thin, even coat to the clean surface. Allow to dry for 2 hours. Under adverse conditions (i.e. low temperatures, poor air circulation) up to 4 hours may be necessary.

Surfaces primed with N-15 Primer should be topcoated as promptly as possible after the primer had dried. If prompt topcoating is not possible, protect the surface from moisture.

## Application Instructions

N-79 is shipped unaccelerated and can only be used after accelerating with N-300-9 Accelerator. Plan work so that each job can be finished within the work day or 8 hours. Do not waste material by accelerating more than is needed.

FOR SPRAY APPLICATION – Stir Republic N-300-9 Accelerator thoroughly before mixing into N-79. Add N-300-9 Accelerator to N-79 and stir very thoroughly. The following spray combination (or its equivalent) has been used effectively:

<b>Devilbiss MBC Spray Gun</b>	<b>Tip</b>	AV15EX.
	<b>Cap</b>	32L or 704.
	<b>Pot Pressure</b>	4 to 6 psi.
	<b>Atomizing Pressure</b>	15 to 25 psi.
	<b>Fluid Adjustment</b>	Open one turn.
	<b>Spreader Adjustment</b>	Open full.
		Hold gun 5" from work.

Check the oil-water separator for proper action and be certain no moisture is carried in the air. Move the spray pattern over the work at a speed that will leave the area evenly wet and smooth in appearance. Two or three fast passes per coat is preferable to one slow pass since it gives a slightly greater coat thickness with less danger of running or sagging.

## Technical Information

<b>Colors</b>	Black (olive-black after acceleration).
<b>Application</b>	Brush or spray.
<b>Coverage</b>	275 sq. ft./gallon/mil.
<b>Unit Coat Thickness</b>	1 to 1.5 mils/coat.
<b>Accelerator</b>	N-300-9.
<b>Primer</b>	N-15.
<b>Thinner &amp; Cleaner</b>	N-450-9.
<b>Pot Life</b>	8 hrs. min @70°F.
<b>Storage Stability</b>	1 yr. unopened @ 74°F (23°C) from date of manufacture.
<b>Solids Content</b>	25.0% (by weight), 17.2% (by volume).
<b>Density</b>	7.9 lbs./gal. (N-79 unaccelerated), 14.2 lbs./gal. (N-300-9 Accelerator).
<b>Viscosity</b>	3,250 cps $\pm$ 750 cps.
<b>Tensile Strength</b>	1,800 psi (min) 7 days @ 75°F.
<b>Elongation</b>	750% (min) 7 days @ 75°F.
<b>Specific Gravity</b>	0.95 (N-79 unaccelerated), 1.7 (N-300-9 Accelerator).
<b>Flash Point</b>	40°F (4°C) (N-79), 80°F (27°C) (N-300-9 Accelerator).
<b>Available In</b>	1, 5, & 55-gallon containers.

NOTE: After spraying 2 coats, work may be examined for entrapped air. If any is present, it can be released by spraying the surface gently with Republic N-450-9 Thinner & Cleaner.

Allow only enough time between coats for the shiny wet appearance to disappear. Under normal drying conditions, about 10 minutes drying time between coats should be satisfactory. Therefore, a continuous coating application can be maintained since the first

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## Neoprene Radome Coating

spot sprayed should be sufficiently dry by the time the complete area is sprayed. A minimum of 10 spray coats should be applied, yielding a total top coat thickness of .007" to .009" (excluding primer). The completed coating will air dry, tack-free to touch, in 6 hours under standard conditions.

**FOR BRUSH APPLICATION** – Stir N-300-9 Accelerator thoroughly before mixing with N-79. Add N-300-9 Accelerator to N-79 and stir very thoroughly to attain the best dispersion. Apply the accelerated N-79 by brush, using short, even strokes. Avoid a scrubbing action. Brush from dry to wet areas. After the material has been applied, do not disturb.

**NOTE:** Avoid dipping or immersion of entire brush into the accelerated N-79, since this may leave an excessive amount of air entrapped in the material. Hold the brush at an angle and pick up material on one side of the brush only, leaving the other side practically dry. The other side of the brush can then be used to an advantage on counter-stroking for even distribution of material. Any entrapped air can be released by spraying the surface gently with a mist of N-450-9.

Allow enough time between coats for the shiny wet appearance to disappear. Under normal drying conditions, 10 minutes drying time between coats is satisfactory. Continuous coating application can be maintained since the first spot brushed should be sufficiently dry by the time the complete area has been brushed. A minimum of 9 coats should be applied to obtain a total thickness of .007" to .009" (excluding primer). Completed coating will air dry, tack-free to touch, in 6 hours under standard conditions.

**SHOP TIPS:** When spraying, guard against moisture by draining the oil-water separator often. Moisture shows up in the work as a white blush. Do not use any material that has begun to gel after acceleration. Use a brush thoroughly wet with N-450-9 to smooth out runs in the work. If the coating is partially finished and must be left overnight (this situation should be avoided), further coats must be applied carefully to avoid lifting the previous work. Start with light coats and allow 1 hour drying time between them.

### **Curing Cycle**

The finished coating should cure for at least 5 days at room temperature. In an emergency, the coated article may be put into service after force curing 2–3 hours at 150°F. Allow a minimum 24 hours air drying at room temperature before force curing.

### **Repair**

When the cured coating is blistered, or a localized failure of the coating occurs in service, repair may be made as follows. Trim away loose coating and sand open area of laminate to a smooth surface using 180 grit emery, or equivalent, and wipe free from dust. Apply primer and accelerated N-79 as previously described.

**NOTE:** Avoid applying a repair coating much beyond the edge of the area to be repaired, as adhesion to the existing coating is only fair. Avoid a build-up of thickness of repair coating beyond that specified above, particularly on radomes, since the electrical transmission properties may be critically affected.

## **The Republic Powdered Metals Coating & Lining Systems Philosophy**

There are no short-cuts to success and no "cure-all" products in the corrosion protection business. A "system" approach is the only means to achieving long-term protection. Republic has the necessary primers, adhesives, sealants, and caulking compounds that are compatible with a wide variety of protective coatings and linings to provide a complete system of protection for abrasion, corrosion and chemical attack problems.

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