

## Description

Republic N-200 is a two-component liquid Neoprene lining, which provides outstanding resistance to chemicals, weathering, abrasion, corrosion, and salt water. Able to be air or heat cured, N-200 forms a tough, resilient, homogenous surface.

## Uses

Pipes and valves, pumps, impellers, agitators, fans, concrete and steel tanks, small parts and/or irregular surfaces.

## Advantages

- A lining applied as a liquid, N-200 Neoprene Liquid Lining protects irregular surfaces and small areas.
- Resists temperatures up to 200° F.
- Compatible with other Republic products for a systems approach to corrosion and abrasion problems.
- Can be stored up to 6 months for quick maintenance applications.
- Provides excellent resistance to weathering, abrasion, corrosion, and salt spray.
- Easily repaired for a long service life.

## Surface Preparation

**METAL** – Sandblast surfaces to white metal (SSPC-SP5). Remove all dust, dirt, grease, etc. Sharp corners and edges must be ground to a radius.

**CONCRETE** – Etch using a light agitating action to assure thorough wetting and intimacy of contact. Three minutes later, rinse with clean water using a light scrubbing action. Allow to dry thoroughly before priming.

**WOOD** – Clean thoroughly and make sure surface is dry. Wipe with Republic N-450-1 Thinner & Cleaner and allow to dry 15 minutes before priming. When applying Neoprene, use Republic A-4 Accelerator.

All surfaces require a primer coat. Let dry a minimum of 1 hour.

## Application Instructions

N-200 is shipped unaccelerated and is ready for use only after the proper accelerator has been added. For air or heat cure, use 2 fluid ounces of A-4 Accelerator per gallon of N-200. A pot life of 2 hours may be expected depending on ambient temperatures.

On vertical surfaces the build per coat will be slightly less when first accelerated. It is necessary to allow the accelerated N-200 to sit for a short period (30 minutes to 1 hour) before application on vertical surfaces to obtain a build of 5 mils.

**BY BRUSH** – Use full brush and lay on material in short, even strokes. Avoid excessive scrubbing action. After each coat, spray surface with atomized solvent N-450-1 using conventional "flit" gun to disperse air bubbles incurred in brushing. Allow approximately 2 hours drying time between coats. If finished coat is to be force dried or warm air cured, let air dry overnight before applying heat.

**BY SPRAY** – For spray application, use Binks # 18 gun, Binks # 66 Needle and Fluid Nozzle, Binks # 66 PA or PB air cap, pressure pot equipped with 100 lb. regulator for pot pressure and separate 150 lb. Oil water extractor, and an additional 150 lb. Oil and water extractor to supply moisture-free air gun or the equivalents.

## Technical Information

Color	Black.
Application	Roller, brush, spray or flow.
Coverage	570 sq. ft./gallon/mil.
Unit Coat Thickness	5 mils dry/coat.
Adhesion	35 lbs. heat cured (ASTM D 429), 27 lbs. air cured (ASTM D 429).
Primer	N-11.
Accelerators	A-4 (lead free).
Thinner & Cleaner	N-450-1.
Storage Stability	6 mo. (unaccelerated) unopened @ 74° F (23° C) from date of manufacture.
Specific Gravity	1.0.
Density	8.7 lbs./gal.
Solids Content	39% ±3 (by weight), 35% ±1 (by volume).
Flash Point	45° F (7° C) (ASTM D 3278)
Hardness	60 ± 5 Shore A heat cured, 50 ± 5 Shore A air cured.
Tensile Strength	1,000 psi heat cured, 800 psi air cured.
Elongation	500% heat cured, 700% air cured.
Water Absorption	4% by volume (ASTM D 471), 2% by weight (ASTM D 471).
Available In	5 & 55 gallon containers.
Military Specification	MIL-R-15058.

# N-200

## Neoprene Liquid Lining

Air and fluid lines should be maximum size to insure pressure requirement at the gun. Pot pressure should be 40 - 60 psi. Atomizing pressure at gun should be 40 - 60 psi.

Dilute 1 gallon of N-200 with 1 to 2 pints of N-450-1. Use a 2-pass per coat technique with a unit coat thickness of 4 - 6 mils. The original pass should be in one direction with the second pass at a 90° angle to the original pass. Allow any air in the coating to come to the surface. Mist spray surface with N-450-1 with suction cup or 2-gallon pressure pot.

NOTE # 1: When using A-4 Accelerator, no more material should be accelerated than can be used in 2 hours time. Except where the equipment is being used continuously, the pot, lines, and gun should be flushed out after each application or at the end of each application day to prevent material from setting up in the pot, line, or gun. The solvent used for this cleaning is N-450-1.

NOTE # 2: All materials used in spray equipment should be strained through fine mesh screen or suitable strainers when charging the spray pot. This should be done after acceleration and thinning and will prevent minute pigment particules, etc. from creating problems in the gun or nozzle.

NOTE # 3: Check back over the coated surface several times after each coat to insure that the air entrapped has been released by the use of a solvent mist spray. This will only be necessary until the proper timing can be established with relation to drying conditions for the application of the mist spray.

BY ROLLER – Apply, as is, without thinning in the usual manner; but make sure the roller is kept wet at all times.

BY FLOW APPLICATION – This method is used mostly in lining pipes. Pipe lengths to be lined, after sandblasting, should be placed at a 45° angle and a container placed at the bottom to receive material draining out. First apply Republic N-11 Primer by pouring through the top end of the pipe, rotating pipe to make sure the entire surface is covered.

Accelerate N-200 with 4 fluid ounces of A-4 Accelerator, pour accelerated material into pipe until material flows out lower end, then turn pipe slowly while maintaining a steady flow of material. When complete revolutions of pipe have been made, stop and allow to drain.

When applying subsequent coats, pour at different point than before and repeat turning and draining until required thickness is achieved, inverting pipe when 50% of coats are applied. Lining is ready for warm air cure after overnight air cure of final coat.

### Curing Instructions

The lining will cure at ambient temperature in 14 days. If a faster cure is desired, warm air must be applied. A minimum overnight air drying at room temperature, after application of the last coat, is required before applying heat. For a heat cure, start at room temperature and gradually increase approximately 12° per hour until the desired curing temperature is reached.

Air Temp.	Time Required to Obtain 1000* psi
125° F	5 days
150° F	36 hours
175° F	12 hours
200° F	4 hours

\*Lab test valued on films 10 to 15 mils thick. Specimens normalized at room temperatures for 24 hours after curing.

When using A-4 Accelerator, cure for 24 hours at 200° F, after raising temperature at a rate of 12° per hour.

The above recommended type of heat cure will give the very best results since past experience has shown that a gradual and controlled rise in temperature at the end of the cure produced optimum results.

## 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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