

URS 2787

SPRAY URETHANE SYSTEM

87 SHORE A

DESCRIPTION

URS 2787 is a ambient temperature curing two component, polyurethane coating designed for abrasion and corrosion resistance in numerous and varied environments. Many acid, caustic and salt water corrosion problems can be controlled by **URS 2787's** unique combination of properties. **URS 2787's** low coefficient of friction make it an excellent material in wet or freezing applications where release properties are a necessity. This system is readily suited for slurry operations and environments where particles size is minus .125 inch. **URS 2787** can be applied with ordinary airless equipment up 100mil dry film thickness.

LIQUID

PROPERTIES

ISO 770A

AMN 6040B

MIXED

Appearance	Lt. Gray Liquid	Lt. Brown Liquid	Lt Gray Liquid
Weight per Gallon	8.50-8.65	7.10-7.30	8.30-8.40
Weight Solid %	67.50	14.00	58.00
Viscosity 75 Deg F.	5500-7000	50-200	5000-5400
Flash Point, Tag CC	93 Deg F.	100 Deg F.	93 Deg F.

PHYSICAL PROPERTIES

Hardness	(ASTM D2240 – 68) Shore A	87
Tensile Strength`	(ASTM D412 – 68 Die B) psi	4175
Elongation	(ASTM D412 – 68 Die B) %	520
Tear Strength	(ASTM D624 – 54 Die C)	400
Tear Strength	(ASTM D470 - Split Tear)	74
Abrasion Resistance – Taber Index *		
H – 18 Wheels & 1,000 gm weights		30

Operating Temperature (continuous service)

Dry	Minus 40 Deg F to +180 Deg F. **
Wet	up to + 140 Deg F. **

* Taber index: Milligrams of weight lost / 1,000 wear cycles

** Consult Forsch for application in excess of these temperatures.

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MIXING INSTRUCTIONS

Do not mix polymer and curative components together until ready to use. Ratio by volume is 3 parts ISO 770A to 1 part AMN 6040B. **URS 2787** will not cure properly if mix ratio is not accurate. Stir ISO 770A before adding the AMN 6040B. Mix the two components for three minutes with a power mixer equipped with a propeller type blade. Scrape the mixing containers sides and bottoms with a straight edge tool to blend any unmixed material. Re-mix for two minutes.

POT LIFE

Pot life of **URS 2787** at 70 Deg F. and 50% RH is 2.5 hours. Pot life varies with temperatures and humidity.

APPLYING

Airless techniques and equipment can be used to apply **URS 2787**. **Note** : **URS 2787** has an extremely high application rate, it is possible to induce waves or runs in a coated surface by excessive spraying pressure or by holding the gun too close to the object being sprayed. Tip distance and spray pressure should be adjusted as conditions dictate.

MULTIPLE COATS

URS 2787 can be applied in multiple coats to attain up to 1/8 inch thickness. A 60 to 90 Deg F. environment should be used for coating and curing. Between coats allow a minimum of 20 minutes and a maximum of 4 hours drying time. When coating a vertical surface, it is necessary to apply a very thin "tack" or mist coat to prevent slumping of subsequent coats. About 15 to 20 minutes should be allowed before applying the first full thickness coat. Wait until the first coat "tacks" then successive coats may be applied to the thickness of 20 mils depending on the article being sprayed, the position of the article being sprayed, temperature and the elapsed time into the pot life.

URS 2787 is extremely chemical resistant to most organic and inorganic solutions/slurries within the PH 2 to 12 range. Resistance to most lubricants, oil, grease and detergents is excellent. Generally solvent resistance is not satisfactory. Chemical resistance of selected chemicals is shown below. If chemical resistance for a stated application is in question, the user can run their own test or contact FORSCH for suggestions.

Ammonia	VG	Nitric Acid	U
Hydrochloric Acid	U	Phosphoric Acid	VG
Sulfuric Acid 20%	VG	Propylene Glycol	F
Sodium Hydroxide 10%	VG	MEK	U
Methanol	U	Kerosene	U
Mineral Spirits	F	Toluene	U

VG = Very Good

F = Fair

U = Unsatisfactory

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COVERAGE

URS 2787 ordinary coverage is 840 square feet per mixed gallon of material at 1 mil dry, (1.70 wet mils). Use the following formula to determine quantity needed for a particular application.

$$\text{Gallons: } \frac{(\text{area to be covered sq. ft.}) \times (\text{dry mill thickness})}{840}$$

Adjust material requirements by estimating overspray and waste.

CURE RATES

URS 2787 cure rate for 125 mils depends on temperature and humidity as indicated:

Days required at 50% RH

<u>Cure</u>	<u>60 Deg. F.</u>	<u>75 Deg. F</u>	<u>90 Deg F.</u>
80%	2	1	1
100%	4	2	2

Cure time will double for coatings if humidity drops below 30%

APPLICATION INSTRUCTIONS

Surface Preparation: All surfaces should be clean and completely dry. Aluminum, wood, concrete, brick, fiberglass, rubber, steel and galvanized and coated surfaces. Proper adhesives should be used with all substrates. Metal surfaces should be sandblasted per SSPCV-SP 5-63 "White Metal Blast Cleaning" A 4 mil profile is desirable. First apply a thin coat of FORSCH ADH1001, wait around 15 minutes at 70 Deg F. then apply **URS 2787**.

RE-COAT PROCEDURE FOR FORSCH 2790

If it is not possible to re-coat the surface within 4 hours an application of Forsch ADH 1001 adhesive in conjunction with buffing, may be required to ensure adequate innercoat adhesion.

CLEAN UP, STORAGE AND DISPOSAL

Equipment Cleaning: Spray pumps should be cleaned with methyl ethyl ketone after each application to prevent material build up inside the unit. Using methyl ethyl ketone flush out all urethane remaining in the spray unit until solvent stream is clear. Pump in methyl ethyl ketone until all the prior cleaning solvent is removed from the system. Place the gun in the pail and circulate for 10 minutes. Allow methyl ethyl ketone to remain in unit overnight.

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SHELF LIFE

URS 2787, when stored at 70 Deg F. in its original unopened containers is guaranteed for a period of 6 months. Long term storage temperatures should not exceed 80 Deg. F.

STORAGE

Systems should be stored unopened in air tight containers at 60-90 degrees F. Partially emptied containers should be swept free of atmospheric moisture with dry nitrogen before sealing.

HANDLING PRECAUTIONS

For complete and updated health and safety information, read the MATERIAL SAFETY DATA SHEETS. Do not handle or use until the MATERIAL SAFETY DATA SHEET has been read and understood.