



International Polyurethane Systems

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POLYUREA P2001/2 MATERIAL DATA SHEET

PRODUCT DESCRIPTION

P2001/2 is a 100% solids, two component, semi-rigid, high performance polyurea elastomer based on aromatic MDI. This formulation is based on amine polyols for use in high pressure spray equipment, in a 1:1 ratio by volume, and has a very fast cure profile. P2001/2 is a universal polyurea coating and can be used for a wide range of industrial applications including: chemical containment, tank linings, concrete restoration, pipeline coatings, marine applications, floor coatings, potable water, pond linings, rail car coatings, spray moldings, and various other outdoor applications. P2001/2 has a hardness range of 50 – 60 Shore D.

FEATURES

There are several advantages to using plural component polyurethane spray systems:

- Durable
- Highly abrasion resistant
- Highly chemical resistant
- Flexible
- Appearance
- Mixed, cured wastes are non hazardous
- Reduced time (cures quickly)

TECHNICAL DATA

Chemical Properties

Properties	Unit	Test Method	Typical Values		
			Polyol	Isocyanate	Mixture
Appearance			amber	clear	amber
Density	g/cm ³	ASTM-D 1475	1.01	1.14	1.08
Viscosity @ 25°C (Brookfield DV-2+ @ 20RPM Spindle 3)	cP	ASTM-D 4878	500 ± 200	1200	
Mixing Ratio @ 22°C	by volume		100	100	
Potlife @ 22°C	s				3 - 8

Physical Properties

Properties	Unit	Test Method	Typical Values
			Mixture
Shore Hardness	Shore D	ASTM-D 2440	50 – 60
Tensile Strength (7 days)	psi	ASTM-D 412	2300 ± 300
Elongation @ Break (7 days)	%	ASTM-D 412	200 ± 50
Taber Abrasion (CS-17 wheel)	mg lost/1000 cycles	ASTM-D 4060	10.6
Water Absorption (24 hrs @ 21°C)	%	ASTM-D 471	Approx. < 1%
Tear Strength (Die C)	pli	ASTM-D 624C	400 ± 50
Modulus (100%, 200%)	psi	ASTM-D 412	1200, 1900 ± 300
Acid/Base Resistance			Very Good

SAFETY/PRECAUTIONS

CORROSIVE AND IRRITATING TO EYES, SKIN AND LUNGS. MAY BE AGGRAVATING TO ASTHMA, BRONCHITIS, EMPHYSEMA, SKIN ALLERGIES, AND ECZEMA. HARMFUL OR FATAL IF SWALLOWED.

Use only with adequate ventilation. Do not wear contact lenses when handling. Wear chemical resistant gloves and eye protection when in contact. Keep container tightly closed when not in use. Have an eye wash station and emergency shower available.

First Aid: See MSDS

CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THIS MATERIAL. THE USER OF THIS MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL, RESIDUES, AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL FOR HAZARDOUS AND NON-HAZARDOUS WASTES.

Empty containers should be decontaminated and either passed to an approved drum recycler or destroyed.

Emergency Contact Number: Canutec (613)-966-6666

SURFACE PREPARATION

All surfaces must be clean, dry and free from dust, dirt, oil and other foreign materials before application of coatings. All loose paint, mortar spatter, mill scale and rust must be thoroughly removed from the surface. Voids and pits should be filled prior to polyurea application. If applying to new steel, or a smooth surface, the surface should be sand blasted or etched, including an appropriate epoxy or polyurethane primer, forming a surface profile to which the coating can adhere to.

APPLICATION/DIRECTIONS

These are initial start-up parameters, some tuning may be necessary to compensate for machine and equipment variations and desired spray-pattern. (large chamber sizes require much higher pressures)

Equipment Setup:

Primary heaters: 170 F, both sides

Hose: 170 F

Gun: Fusion AP: FT0424 tip and chamber size AF 2020

Pressure: 1600-2500psi

Material preparation is critical:

Part B needs to be mixed with a rotary mixer for at least 30 minutes to ensure it is evenly blended. Both A & B need to be protected from atmospheric moisture by the use of **dry air desiccant** canister for air entering the drums when in use.

Air compressor requirements:

Dry air is a must for consistent quality. Install auto bleeders on compressor and water separators and desiccant dryers close to the spray equipment. The silica-gel changes color from purple to pink when exposed to water.

Apply only to properly prepared substrate (see your industry's published guidelines). Apply first coat at less than 10 mil (0.25 mm) and allow to become tack free before continuing. Apply following coats at 20 mil (0.5) per layer and allow surface to become tack free before applying subsequent coats. Spray with uniform motion and allow 50 to 75% overlap. Application temperature is 18-30 °C (59-86 F). **Coatings should not be applied unless surface is a minimum of 5 °C (41 F) above the dew point.**

STORAGE/SHELF LIFE

Material should be stored in a tightly closed container. Keep in a cool, dry, and well ventilated place. Keep away from incompatible materials. Avoid contact with water or moist air. Drums should not be sitting on the cold concrete floor, keep them on a wooden pallet. Keep at a temperature between 20-25°C (75-77°F) for quality reasons; temperature must not fall below 18 °C (59 F). This product has a shelf life of approximately 6 months.

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