



International Polyurethane Systems

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## CASTING CST101/3 MATERIAL DATA SHEET

### PRODUCT DESCRIPTION

CST101/3 is a 100% solids two component, flexible, polyurethane elastomer, based on aromatic MDI. Hardness range is from 88-92 Shore A. This is our standard system, setup for use with low pressure 2:1 equipment with static mix tips. This elastomer was based on our standard 2:1 spray-boxliner. It is ideal for a range of applications including molding-making, casting parts and potting, or in spray-coating applications where a longer cure time is desired. This system has a pot life from 35 – 40 seconds and can be adjusted to meet the specifications of your application. IPS manufactures top of the line polyurethanes providing consistent results – every time.

### FEATURES

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

- Durable
- Highly abrasion resistant
- Flexible
- Environmentally friendly (0 VOC emission)
- Mixed, cured wastes are non hazardous
- Reduced time (cures quickly)

### TECHNICAL DATA

#### Chemical Properties

Properties	Unit	Test Method	Typical Values		
			Polyol	Isocyanate	Mixture
Appearance			off-white	clear	amber
Density	g/cm <sup>3</sup>	ASTM-D 1475	1.03	1.18	1.08
Viscosity @ 25°C (Brookfield DV-2+ @ 20RPM Spindle 3)	cP	ASTM-D 4878	1450	675	700 ± 200
Mixing Ratio @ 22°C	By weight		100	60	
Potlife @ 22°C	s				35 - 40
Tackfree Time @ 22°C	s				50-60

#### Physical Properties

Properties	Unit	Test Method	Typical Values
			Mixture
Shore Hardness	Shore A	ASTM-D 2440	88 – 92
Tensile Strength (7 days)	psi	ASTM-D 412	1600 ± 100
Elongation @ Break (7 days)	%	ASTM-D 412	200 ± 50
Taber Abrasion (CS-17 wheel)	mg lost/1000 cycles	ASTM-D 4060	Approx. < 1%
Acid/Base Resistance			Very Good

## SAFETY/PRECAUTIONS

**COMBUSTIBLE LIQUID AND VAPOR. 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 coating application. If applying to new steel, or a smooth surface, the surface should be blasted or etched, forming a surface profile to which the coating can adhere to.

## APPLICATION/DIRECTIONS

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). If spraying, 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. Keep at a temperature between 20-25°C (75-77°F) for quality reasons. This product has a shelf life of approximately 6 months.

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