

SP-205 A/B

80 SHORE D SPRAY APPLIED POLYURETHANE



SP-205 A/B is a two component rigid polyurethane material designed to provide high strength, high impact, and good heat resistance for the fabrication of structural parts, composite type structures, and for coatings that serve many purposes.

SP-205 A/B can be sprayed with conventional plural component high pressure spray equipment or with BJB's CPE-25 and CPE-40 pneumatic hand held spray guns.

- ◆ Used for rapid production of parts, composite structures, and molds
- ◆ Provides excellent surface finishes built on polyurethane rigid foam and styrofoam
- ◆ Superior adhesion to a wide variety of substrates, most notably rigid foams and wood
- ◆ Excellent impact resistance coupled with high flexural strength
- ◆ Provides very fine detail reproduction
- ◆ Convenient 1:1 by volume mix ratio

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|-------------------------------|-----------------------|--------------------------|
| • Movie Special Effects Props | • Prototype Models | • Theming |
| • Art Industry | • Automotive Industry | • Architectural Industry |

PHYSICAL PROPERTIES	TEST METHOD	ELEVATED TEMPERATURE CURE*
Hardness, Shore D	ASTM D2240-04e1	80 ± 5
Density (g/cc)	ASTM D792-00	1.175
Cubic Inches per Pound	N/A	24.78
Color/Appearance	Visual	Gray / Opaque
Tensile Strength (psi)	ASTM D638-03	5,900
Tensile Modulus (psi)	ASTM D638-03	234,000
Elongation (%)	ASTM D638-03	22
Flexural Strength (psi)	ASTM D790-03	8,400
Flexural Modulus (psi)	ASTM D790-03	220,000
Shrinkage (in/in) linear	12"x1/2"x1/2"	0.0082
Izod Impact (ft-lb/in) notched	ASTM D256-05	0.77
Heat Deflection Temperature (66 psi)	ASTM D648-04	190°F (87.8°C)
Heat Deflection Temperature (264 psi)	ASTM D648-04	148°F (64.4°C)

*Note: Reported physical properties are based on test specimens cured 1-3 hours at room temperature then 16 hours at 180°F (82°C).

HANDLING PROPERTIES	Part A	Part B
Mix Ratio by weight	100	90
Mix Ratio by volume	100	100
Specific Gravity @ 77°F (25°C)	1.18	1.052
Color	Yellow	Gray
Viscosity (cps) @ 77°F (25°C) Brookfield	325	1,000
Mixed Viscosity (cps) @ 77°F (25°C) Brookfield	650	
Gel Time	30 – 35 seconds	
Demold Time @ 77°F (25°C)	30 – 45 minutes	

Properties above are typical and not for specifications.

CURE SCHEDULE:

Most of the physical properties can be achieved in 5-7 days at 77°F (25°C). You may use your own post-cure schedule but the physical properties may vary from BJB's cure schedule of 1-3 hours at 77°F (25°C) followed by 16 hours at 180 °F (82°C). Do not exceed curing temperatures of 200°F (93°C). Support of the part may be required to prevent part deformation during the heat curing process.

STORAGE:

Store at ambient temperatures, 65-80°F (18-27°C). Unopened containers will have a shelf life of 6 months from date of shipment when properly stored at recommended temperatures. Purge opened containers with dry nitrogen before re-sealing.

PACKAGING	Part A	Part B	Cubic Inches per Kit
Gallon Kits	8 lbs.	7.2 lbs.	377
5-Gallon Kits	40 lbs.	36 lbs.	1,883

SAFETY PRECAUTIONS:

Avoid contact with skin using protective gloves and protective clothing. Repeated or prolonged contact on the skin may cause an allergic reaction. Eye protection is extremely important. Always use approved safety glasses or goggles when handling this product. Use in well-ventilated areas. Avoid breathing vapors. If exposures cannot be kept at a minimum, a respirator may be necessary in addition to ventilation. The use of a positive pressure air supplied respirator is mandatory when airborne isocyanate concentrations are "not known" or exceeds OSHA'S TWA of 0.005 ppm. Air purifying, organic cartridge type respirators are not generally recommended to use when handling this material without implementation of an end of life service program. Observe OSHA regulations for respirator use (29 CFR 1910.134). Employers are responsible for selecting the correct respirator for each situation.

IF CONTACT OCCURS:

Skin: Immediately wash with soap and water. Remove contaminated clothing and launder before reuse. It is *not* recommended to remove resin from skin with solvents. Solvents only increase contact and dry skin. Seek qualified medical attention if allergic reactions occur.

Eyes: Immediately flush with water for at least 15 minutes. Call a physician.

Ingestion: If swallowed, call a physician immediately. Remove stomach contents by gastric suction or induce vomiting only as directed by emergency personnel. Never give anything by mouth to an unconscious person.

Refer to the Material Safety Data Sheet before using this product.

⚠WARNING: This product can expose you to chemicals including 1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich and Titanium Dioxide (TiO2) which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.



Handling Guide