

## Water Clear / Rigid

Water-clear, rigid polyurethane

### Key Properties

- Easy to polish
- Transparent and pigmentable
- Good impact strength
- Good UV resistance

### Applications

- Functional prototype parts
- Short run production
- Rapid Prototyping

### Processing Properties

			Resin (Isocyanate)	Hardener (Polyol)
Mix ratio		pbw	100	56
		pbv	100	57
Density	ASTM D-792	g/cm <sup>3</sup>	ca. 1.07	ca. 1.05
Viscosity at 77°F (25°C)	ASTM D-2393	cP	250	ca. 1,250

			Mixture
Mix viscosity at 77°F (25°C)	ASTM D-2393	cP	12,500
Gel Time at 77°F (25°C)		min	18 – 22
Demold time at 77°F (25°C)		min	110 – 130

### Cured / Mechanical Properties (approximate values)

Cure: 2 days at 77°F (25°C)			OC-5436
Aspect	visual		Transparent
Density	ASTM D-792	g/cm <sup>3</sup>	1.06
Shore hardness D	ASTM D-2240		80 – 85
Deflection temperature, HDT (66psi)	ASTM D-648	°F (°C)	210 (99)
Coefficient of thermal expansion	ASTM D-3386	10 <sup>-6</sup> F <sup>-1</sup> (10 <sup>-6</sup> K <sup>-1</sup> )	61 – 72 (110 – 130)
Flexural strength	ASTM D-790	psi	16,000
Flexural modulus	ASTM D-790	psi	390,000
Notched Izod	ASTM D-256	ft·lbf/in	1.0
Linear shrinkage	ASTM D-2566	in/in	0.003 – 0.008

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**Processing**

**The processing and material temperature should be between 68-77°F (20-25°C).**

For best results, de-air the material prior to casting, then pressurize to 60 psi until cured. However, if pressure cannot be used, this material has been designed for vacuum degas only. OC-5436 can be easily buffed when cured.

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**Packaging**

OC-5436 Quart Kit	3.12 lbs.
OC-5436 1 Gal. Kit	12.48 lbs.
OC-5436 5 Gal. Kit	62.40 lbs.
OC-5436 Drum Kit	702 lbs.

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**Storage**

Original containers should be kept tightly sealed and stored at ambient temperatures 59-86°F (15°C to 30°C). If properly stored the products have the shelf-life indicated on the product label. Partly used containers should always be sealed appropriately and used up as soon as possible.

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**Handling Precautions**

Good workplace ventilation is to be ensured during processing. At the same time, the employer's liability insurance association's industrial hygiene safety regulations regarding the handling of reaction resins and their hardeners are to be observed. Please take heed of the appropriate safety data sheets.

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