

### Elvacite® 4170 Acrylic Resin

Elvacite® 4170 is a low weight methyl methacrylate polymer designed for use in plastic coatings to provide hard, resistant coatings with low viscosity.

#### **Applications**

- Plastic and Vinyl Coatings

#### **Benefits**

- Provides hard, chemically resistant films
- Low Viscosity solutions

#### **Typical Physical Properties**<sup>a</sup>

Glass Transition Temperature (°C):	105
Molecular Weight:	39,000
Form:	Spherical beads
Specific Gravity:	1.19
Acid Number:	0
Packaging:	125 kg (275 lb net), non-returnable fiber drums

a) *Typical physical properties listed are approximate values and should not be considered manufacturers release specifications.*

## **Solvent Solubility**

Table I shows the solubility of Elvacite® 4170 at 20% solids in various solvents.

**Table I: Solubility of Elvacite® 4170** (*S = Soluble, C = Cloudy solution, I = Insoluble*)

### **Alcohols**

Methyl Alcohol	I	Ethyl Alcohol	I	n-propyl alcohol	I
Isopropyl alcohol	I	Isoamyl alcohol	I	Cyclohexanol	I
Ethylene glycol	I	Glycerol	I		

### **Amides**

Formamide	I	Dimethyl formamide (DMF)	Sb
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### **Chlorohydrocarbons**

Methylene Chloride	S	Ethylene dichloride	S	Perchloroethylene	C
1,1,1-Trichloroethane	I				

### **Esters**

Methyl Formate	S	Ethyl acetate	S	Isopropyl acetate	S
n-Butyl acetate	S	n-Amyl acetate	C	Butyl lactate	S
Propylene glycol monoethyl ether acetate	S	Methyl amyl acetate	I		

### **Ethers**

Diethyl Ether	I	Diisopropyl ether	I	Tetrahydrofuran (THF)	S
“Cellosolve” Solvent	C				

### **Hydrocarbons**

Toluene	C	Xylene	I	n-Hexane	I
Cyclohexane	I	VM & P Naphtha	I	Mineral Spirits	I
Turpentine	I				

### **Ketones**

Acetone	S	Methyl Ethyl Ketone	S	Methyl Isobutyl Ketone	C
Diisobutyl ketone	I	Cyclohexanone	I	Isophorone	I
Diacetone Alcohol	C	Methyl amyl ketone	I		

### **Nitrile**

Acetonitrile	S
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### **Nitroparaffins**

Nitromethane	S	Nitroethane	S
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### **Vegetable Oils**

Castor oil	I	Linseed oil (alkali-refined)	I
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## Resin Compatibility

Elvacite® 4170 is compatible with the following Elvacite® Resin Grades: 2009, 2010, 2021, 2041 and 2013. It is also compatible with the other types of resins, as illustrated in the following table:

Blending Resin	Description	Form of Blended Resin Tested	Supplier	Elvacite / Blending Resin (by solids weight)		
<b>Alkyd</b>				75/25	50/50	25/75
Aroplaz 1271	Long linseed drying oil	30% in MEK	Spencer Kellog	I	I	H
Aroplaz 1351	Long castor nondrying oil	30% in MEK	Spencer Kellog	C	H	H
Chempol 13-1410	Safflower drying oil, acrylate mod.	50% in Xylene	Freeman Chemical	-	I	I
Paraplex RG-2	Nondrying oil, sebacic	30% in MEK	Rohm & Haas Co.	I	I	I
Plaskon 3105	Short coconut nondrying oil	60% in Xylene	Cargill, Inc.	---	H	H
<b>Cellulosic</b>						
Cellulose acetate 39-5-5B		30% in Acetone or MEK	Hercules Inc.	I	I	I
Cellulose Acetate Butyrate, ½ - sec.		30% in MEK	Eastman Chemical	C	C	C
Ethyl Cellulose N-7		30% in MEK	Hercules Inc.	I	I	I
Nitrocellulose "RS", ½-sec Isopropyl		MEK/alcohol soln.	Hercules Inc.	C	C	C
<b>Epoxy</b>						
Epon 828		100% Resin	Shell Chemical Co.	C	---	C
Epon 1001		30% in MEK	Shell Chemical Co.	C	C	C
<b>Elastomers</b>						
EMD-504	Polyisobutylene	30% in Toluene	Exxon Chemical	I	I	I
Hypalon 30	Chlorosulfonated polyethylene	15% in Toluene	Dupont Polymers	I	I	I
Neoprene AC-Soft	Polychloroprene	15% in Toluene	Dupont Polymers	I	I	I
<b>Resin Derivatives</b>						
Ester Gum 8L		30% in MEK	Hercules Inc.	H	I	I
Pentalyn 255	Pentaerythritol ester	30% in MEK	Hercules Inc.	H	H	H
Pentalyn 830	Pentaerythritol ester	30% in MEK	Hercules Inc.	H	H	H
<b>Vinyl Chloride Resins</b>						
Bakelite VAGH	Copolymer	30% in MEK	Union Carbide	C	C	C
Bakelite VMCH	Copolymer	30% in MEK	Union Carbide	C	C	C
Bakelite VYHH	Copolymer	30% in MEK	Union Carbide	C	C	C
Bakelite VYNS	Copolymer	15% in MEK	Union Carbide	C	C	C
Exon 450	Copolymer	15% in MEK	Firestone Plastics	C	C	C
Exon 9290	Homopolymer	15% in THF	Firestone Plastics	C	C	C
Geon 103 EP	Homopolymer	15% in THF	B.F. Goodrich	C	C	C
<b>Other Types</b>						
Arochem 650	Maleic-modified hard resin	30% in MEK	Spencer Kellog	C	C	C
Aroset 4110	Acrylic resin	30% in MEK	Spencer Kellog	C	H	H
Dammar		30% in Toluene		H	I	H
DC-840	Silicone resin	60% in Toluene	Dow Corning Corp.	C	C	C
Parlon S 10	Chlorinated rubber	30% in MEK	Hercules Inc.	I	I	I
Piccoumaron	Coumarone-indene resin	30% in MEK	Hercules Inc.	C	I	I
Santolite MHP	Sulfonamide-formaldehyde	30% in MEK	Monsanto Co.	C	C	C
Shellac		30% in Methanol		H	I	I
Super-Bechacite 2000	Permanently fusible phenolic	30% in MEK	Reichold Chemicals	C	C	C
Uformite MX-61	Triazine-formaldehyde resin	30% in MEK	Rohm & Haas Co.	I	I	I

## **Plasticizer Compatibility**

Elvacite® 4170 is compatible at a 50/50 resin/plasticizer ratio with the following plasticizers:

Dibutyl phthalate  
Di-(2-ethylhexyl) azelate  
Santicizer 8 (N-ethyl toluene sulfonamides)  
Santicizer 97 (dialkyl adipate)  
Santicizer 160 (butyl benzyl phthalate)  
Santicizer 261 (isooctyl benzyl phthalate)  
Santicizer 278 (benzyl phthalate)  
Santicizer B-16 (butyl phthalyl butyl glycolate)  
Tricresyl phosphate.



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