



Development Associates, Inc.

300 Old Baptist Road, N Kingstown, R I 02852
Telephone (401) 884-1350 FAX (401) 885-7888
Email:sales@daius.com Web:www.developmentassociatesinc.com



Ref No: Z6644DSV4
Page 1 of 2

Data Sheet

Z-6644 Clear Aliphatic Urethane Compound

Product Name: Z-6644

Revised 6/19/2003

Supersedes: 12/7/2001

Description

A flexible casting compound, Z-6644 provides crystal clear castings that are semi-rigid and have excellent resistance to UV and outdoor weathering. Other uses include: potting of photovoltaic cells and other electronic potting applications.

Type

Two component reactive polyurethane

Hazards

Part A for industrial use only. Users must read and understand the MSDS before use.

Part B contains an aliphatic isocyanate prepolymer and must be handled with care. Users must read and understand the MSDS before use.

Storage

Both materials must be protected from moisture. Storage temperature should be 40 - 100°F.

Component Z-6644 Part A

Typical Liquid Properties

Appearance 1-1, clear liquid with a slight yellow tint
Brookfield Viscosity 1-2, as manufactured, 1000-4000 Cps. @ 25°C #2 Spindle RVT @ 20 rpm
500-800 Cps. @ 38°C #2 Spindle RVT @ 20 rpm

Component Z-6644 Part B

Typical Liquid Properties

Appearance 2-1, clear liquid
Brookfield Viscosity 2-2, as manufactured, 100-500 Cps. @ 25°C #2 Spindle RVT @ 50 rpm
40-200 Cps. @ 38°C #2 Spindle RVT @ 50 rpm

Mixing Information

3-1 Ratio by weight Part A 50
Part B 50

3-2 Ratio by volume Part A 50
Part B 50

3-2 Gel time: Adjustable at time of manufacture from 4-30 min @ 38°C

Physical Properties

4-1 Hardness: Shore D 55-65
4-2 Tensile strength: approx. 4000psi
4-3 Elongation 200%

All information, recommendations and suggestions contained herein are to the best of our knowledge true and accurate, but are made without guarantee. No warranty of fitness for a particular purpose is made. Nothing herein shall be construed to allow infringement of any patent.

Mixing and Curing Information

The Part A and B components can be measured by weight or volume. The accuracy of the proportions of each part is very important, an acceptable tolerance for the mix ratio is +/- 0.5%. The material should be mixed thoroughly by a static mixer, or by hand, with a clean spatula in a clean disposable container such as a polypropylene beaker or a plastic lined hot drink paper cup. After hand mixing the material should be degassed in a vacuum chamber at 30 in/Hg vacuum until the initial bubbling subsides. It is not necessary to degass the mixture until all bubbling stops. See the "Recommendations for Hand Casting" bulletin.

After mixing the material it should be cured at 100-200^oF for 1-4 hours depending on the cure temperature.

The exotherm generated by the curing of the material is dependant on the initial mix temperature, ambient temperature, mass of the material and the heat transfer/heat sink properties of the mold material.

Shrinkage on cure is dependant on the temperature of the mixture at the time of cure. If the material is cured at room temperature the shrinkage will be on the order of 0.1-0.25%. Additional shrinkage will be observed as the cure temperature rises. Typical shrinkage at 150^oF is 0.5%.

Cleanup

Liquid resin can be cleaned with Methyl Ethyl Ketone (MEK), Acetone, Toluene, Methylene Chloride, or Isopropyl Alcohol. Cured resin can be softened with the above solvents. Methylene Chloride is particularly effective. The cured resin is not truly soluble in any solvent.

All information, recommendations and suggestions contained herein are to the best of our knowledge true and accurate, but are made without guarantee. No warranty of fitness for a particular purpose is made. Nothing herein shall be construed to allow infringement of any patent.