



EXSILCAP® UF2204

Product Bulletin

Product Specification: Exsilcap UF2204 is a one component, low stress, liquid epoxy encapsulant designed for underfill devices. Flow properties are designed for maximum penetration into small gaps under the chip. When properly cured the material provides rigid protection and improved thermal cycling.

In addition, Exsilcap UF2204 may be suitable for a variety of applications including chip on board and ball grid array packages.

Typical Product Data:

Typical Uncured Properties	Value
Color	Black
Viscosity @ 25 °C (Spindle 4- 60 rpm)	8,000
Storage Stability @ 4 °C	3 months
Specific Gravity	1.73
Filler Content (%)	70
Pot Life @ 25 °C (days)	2
Typical Cured Properties	
Glass Transition (°C)	150
Coefficient of Thermal Expansion (In/In/°C)	22 x 10 ⁻⁶
Flexural Strength (psi)	17,000
Flexural Modulus (psi)	961,200
Extracted Na ⁺	<20
Extracted Cl ⁻	<20

These results are based on standard small scale laboratory tests and as such are not reliable for determining, evaluating, or predicting the ultimate properties for specific applications. End users should run independent tests to determine whether Exsilcap UF2204 is suitable for a particular application.

HANDLING

Exsilcap UF2204 is shipped cold and must be refrigerated or frozen upon receipt. Exsilcap UF2204 should be completely thawed before use. Thawing at room temperature for 30-60 minutes should be sufficient for application. Use of elevated temperatures for thawing is not recommended as the working life may be affected. If thawing in an oven is necessary do not expose to temperatures greater than 140 °F and limit the time to less than 10 minutes. Exposure to heat for too long a time will significantly affect flow characteristics.

CURE SCHEDULE

Recommended Cure: 2 hours @ 150-160 °C

Trials by the end-user should determine acceptable rates for the application.

SURFACE PREPARATION

The performance of electronics packaging materials is highly dependent upon proper surface preparation and processing conditions. All parts should be as clean and dry as possible. Clean parts ensure maximum adhesion and minimize long-term reliability problems. For optimum performance Exsilcap UF2204 should be applied to a substrate pre-heated to 65-75°C.

STORAGE

The warranty period is 3 months from date of shipment from UDC if stored in the original unopened container at 4°C (40°F).

For additional information on this product please contact:

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LEGAL DISCLAIMER

Each user bears the full responsibility for making its own determination as to the suitability of Supplier's materials, products, services, recommendations or advice for its own particular purpose. Each user must identify and perform tests and analyses sufficient to assure it that its finished parts will be safe and suitable for use under end-use conditions. Because actual use of products by the user is beyond the control of Supplier, such use is within the exclusive responsibility of the user, and Supplier cannot be held responsible for any loss incurred through incorrect or faulty use of the products. Further, no statement contained herein concerning a possible or suggested use of any material, product, service or design is intended or should be construed to grant any license under any patent or other intellectual property right of Supplier or any of its subsidiaries or affiliated companies, or as a recommendation for the use of such material, product, service or design in the infringement of any patent or other intellectual property right