

LAUR SILICONE

LAUR 202 SILICONE RUBBER DISPERSION

Type, ASTM D 1418 VMQ
Brittle Point, ASTM D 2137-A -73°C (-100°F)
Physical Form Solvent Dispersion
Special Properties: Ready to use; long pot life; cures to a smooth, tough coating; excellent adhesion to vulcanized or cured silicone rubber, metals, and other substrates without need for a primer.
Primary Uses: Adhesive, coating, and splicing agent.

DESCRIPTION

Laur 202 Silicone Rubber Dispersion, when cured, is a high-strength silicone rubber that may be used over a temperature range of -70°C to 250°C (-94°F to 482°F). It contains a heat curing catalyst and is ready to use. It consists of 29% solids dispersed in xylene. L-202 features application versatility, as well as:

- * Good high temperature stability
- * Long pot life
- * Fast-curing properties
- * Pigmentable

USES

Laur 202 Silicone Rubber Dispersion may be used on a variety of substrates as an adhesive, size coating, or splicing agent. As an adhesive, it will bond both vulcanized and non-vulcanized silicone rubber to most substrates without the use of a primer. As a size coating, it is excellent for glass cloth used in calendering or bonding silicone rubber. As a splicing agent, it joins both vulcanized and uncured silicone rubber.

TYPICAL PROPERTIES (Not intended for use in preparing specifications)

AS SUPPLIED

Color Gray
Percent Solids, % 28-31
Vehicle xylene
Viscosity, Brookfield LVT, cps
Spindle # 3 at 6 RPM 4,000 - 25,000 cps
Specific Gravity at 25°C (77°F) 0.95 ± 0.03

AS CURED (1 hour at 177°C)

ASTM D 2240 Durometer Hardness, Shore A-2 85
ASTM D 412 Tensile Strength, psi 830
ASTM D 412 Elongation, % 125
ASTM D 624 Tear Strength, Die B, ppi 70
ASTM D 624 Tear Strength, Die C, ppi 145

HOW TO USE

Laur 202 dispersion is relatively viscous and fast drying with minimal flow-out. It can be thinned with xylene or other hydrocarbon solvents. Naphtha can be used for thinning if a slower evaporation rate is desired.

POT LIFE

Pot life will vary from a few days to several months and is primarily dependent on the amount of solvent lost through evaporation. Dip tanks and containers should be kept covered when not in use. Solvent lost through evaporation should be replaced as needed. The curing system in Laur 202 is very sensitive to some materials such as sulfur and amine compounds. Even trace amounts of these materials may greatly slow or completely kill the cure system. All equipment used to process the Laur 202 should be clean and free of contamination.

PIGMENTING

Heat-stable pigments used for other silicone rubbers may be used for coloring Laur 202 dispersion. However, certain pigments may inhibit the cure and any pigment should be checked by curing a test sample before using. For best dispersion of the pigment, it is recommended that a pigment masterbatch be used.

APPLICATION METHODS

Dip Coating: To obtain a smooth, even coat, dipped items should be slowly withdrawn from the dispersion at a constant rate. Multiple coats may be applied after solvent has been removed from the previous coat by air drying for 20 to 180 minutes at room temperature, or for 15 to 60 minutes at 43 to 60°C (110-140°F).

Brush Coating: Apply the dispersion liberally for maximum flow-out. To obtain a smoother coat, a slower drying solvent may be used.

Spray Coating: Laur 202 should be thinned to a viscosity suitable for the specific spray equipment being used. Orange-peel texture can be minimized by thinning the dispersion with slower evaporating diluents. Use of airless spray equipment will further minimize the orange-peel texture.

CURING

The solvent should be removed before curing the dispersion. For example, a 5 mil coating on a nonporous surface will air dry in 20 to 180 minutes at room temperature. If a heavier coating is applied, or if the substrate absorbs the solvent, 50 minutes to four hours may be required for solvent removal. Temperatures up to 60°C (140°F) may be used to accelerate solvent removal. Vulcanization conditions can range from 60 seconds at 204°C (400°F) to 5 minutes at 149°C (300°F). Longer times will be required for heavy coatings or if large pieces of rubber or metal are involved. To optimize physical properties, use a final cure of one hour at 160°C (320°F) or 20 minutes at 177°C (350°F).

BONDING

Laur 202 dispersion should be applied to a dry coat thickness of about 5 mils. Solvent should be removed by drying for 20 minutes to 3 hours at room temperature, or by heating for 25 minutes at 60°C (140°F). The solvent free coating remains usable for several days before vulcanization, and if kept clean it will bond effectively after such a wait. Bonding surfaces should be mated and then heated under contact pressure for 5 to 15 minutes at 160°C (320°F). A final oven cure of one hour at 160°C (320°F) helps insure maximum bond strength.

BONDING TO FABRICS

A size coating of Laur 202 dispersion promotes the adhesion of silicone rubber to most fabrics. The dispersion should be diluted to obtain a dry-coat thickness of 1 to 5 mils on the fabric. Remove solvent by air drying 20 to 180 minutes at room temperature or 15 to 60 minutes at 60°C (140°F).

CAUTION

Laur 202 contains xylene, and should be used only with adequate ventilation. Avoid prolonged or repeated breathing of vapor and skin contact. Vapors form explosive mixtures with air. Keep away from heat, sparks, flame, pilot lights, and other sources of ignition.

FDA STATUS

Laur 202 Silicone Rubber Dispersion contains ingredients which are **NOT** listed for food contact use under 21 CFR 177.2600. Therefore, Laur 202 Silicone Rubber Dispersion is **NOT** recommended for use in rubber articles intended for food contact application. Laur 202 Silicone Rubber Dispersion should **NOT** be used for permanent implantations or any critical device category for medical devices under FDA definition of that term.

SHIPPING LIMITATIONS

XYLENE, MIXTURE, UN 1307, FLAMMABLE LIQUID, GROUP III

STORAGE AND SHELF LIFE

Laur 202 should be stored in a cool dry place. When stored at or below 25°C, (77°F) it has a shelf life of (3) three months from date of sale. The dispersion may thicken somewhat in storage. The viscosity can usually be restored to its original value by vigorous stirring.

PACKAGING

Laur 202 dispersion is supplied in 7 and 400-pound containers, net weight.

The information and data contained herein we believe reliable; however it is the responsibility of the user to test any application to determine suitability of the goods with respect to proposed usage. Solvent removal times in particular should be user determined for each application.

Laur silicone, Inc. warrants that the product shall meet applicable descriptions and specifications, and no other expressed or implied warranties are intended. Laur's sole liability is limited to refund or replacement of goods shown to be otherwise than as warranted. Suggestions of uses shall not be interpreted as inducement to infringe any particular patent.