Technical Data Sheet

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Liquid Silicone Rubber LR-LSRAT

Description and Feature:

Liquid silicone rubber LR-LSRAT is two-component addition-type liquid silicone rubber with A:B=9:1, which can be used for the manufacture of lightning arresters, composite insulators and insulation potting of power electrical products.

It has low viscosity, excellent fluidity, hydrophobic, weather aging resistant, excellent electrical insulation performance and good adhesion to the substrate with primer.

Typical Technical Properties:

Item		LSRAT
Before vulcanization	Appearance	A: Light Gray B: Colorless transparent
	Specific Gravity, 25℃, g/cm^3	A:1.08 B: 1.08
	Viscosity (Pa.s), 25℃	A: 30000 B: 30000
	Mixing Ratio	A:B 9:1
	Applicable Period, 25℃	2h
After vulcanization	Tensile Strength (MPa)	5
	Elongation At Break, %	380
	Tear Strength (kN/m)	14
	Hardness (Shore A)	38
	Electric Strength, kV/mm	20
	Dielectric Loss, 50Hz	1X10^{-4}
	Dielectric Constant, 50Hz	2.8
	Volume resistivity (Ω.cm)	10^{15}

Application: Lightning arrester, high-voltage vacuum circuit breaker, composite insulator and vacuum interrupter.

Package &Storage:

In 20kg plastic pail or 200kg large iron drum.

Stored between 0℃ and 30℃. Keep in cool, dry and ventilated place. Keep away from sunlight and fire sources. Keep in unopened containers, shelf life is 6 months from the date of production. It is shipped as non-hazardous substance.

Storage beyond the shelf life does not necessarily mean that the product is no longer usable. In this case

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however, the properties required for the intended use must be checked for quality assurance reasons.

How to use

The A and B components of LSRAT is liquid silicone rubber are fed from the spare storage drum of the injection equipment and mixed in a weight ratio of A:B=9:1 through a static mixer and injected into the molding mold. After mixing the A and B components, the applicable period is about 2 hours at room temperature (25℃), but the temperature rise will shorten the applicable period, so please complete the relevant operations within an appropriate time. If the injection molding equipment is shut down for a long time, the stored glue in the mixing section (static mixer) should be cleaned in time or placed in a low temperature environment (below -10℃) and sealed for storage. When using manual or semi-mechanized operation, first accurately weigh the materials according to the weight ratio of A:B=9:1, and use professional stirring equipment to fully mix the glue for about 10~20min. When stirring, pay attention to scraping the bottom, side walls and stirring paddles of the container, and then vacuum degassing in a dedicated equipment for 10~15min (exhaust can be performed multiple times to speed up the degassing speed). It is also possible to vacuum and stir in a dedicated equipment. It is recommended that the total time of stirring and vacuum degassing be controlled within 30min, and it can also be appropriately adjusted according to the actual operation situation.

Curing conditions:

This product can be vulcanized quickly under heating conditions. The time required for vulcanization depends on the size of the part. For applications where heat transfer can quickly reach the set temperature, the vulcanization time at 120℃ is only 10 minutes. When the part is large, the time required for heat transfer should be fully considered. The time required for the part to cool and demould also depends on the size of the part and the temperature selected for the vulcanization process.

Compatibility:

Certain materials, compounds, vulcanizers and plasticizers will hinder the vulcanization of R624AT. Mainly include:

- Organic tin and other organic metal compounds
- Silicone rubber containing organic tin catalyst
- Sulfur, polysulfide, polysulfone or other sulfur-containing items
- Amine, urethane or amine-containing items
- Unsaturated hydrocarbon plasticizers
- Some flux residues

If there is any doubt about whether an object or material will cause hindrance to vulcanization, it is recommended to conduct a small compatibility test to determine its suitability in this application. If there is liquid or non-vulcanized material on the surface of the object in question and the vulcanized gel, it indicates that there is no compatibility, which will hinder vulcanization.

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Precautions:

The ingredients contained in the A and B components of the addition-curing type have been proven to be non-toxic and harmless for many years, and no special precautions are required, that is, only general industrial hygiene standards are required.

Since the catalyst of this product loses its activity due to poisoning, the material should be prevented from contacting with compounds containing nitrogen, phosphorus, sulfur and heavy metal compounds such as organic tin, and the container should be kept clean.

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