MIDSUN HVIC W/ATH-GREY

INTRODUCTION

Midsun HVIC w/ATH is a one-part silicone room temperature vulcanizing (RTV) high voltage insulator coating designed to prevent flashovers due to leakage current in contaminated environments.

The coating is also highly water repellent, so contaminants cannot film out over the surface. It is a long-term solution to flashover protection.

Midsun HVIC G w/ATH performed well when tested for hydrophobicity retention, salt fog test & inclined plane. Midsun HVIC G w/ATH has been thoroughly examined over a range of tests and has proven superior when compared to similar products.

- Excellent wet & dry electrical performance
- Fast hydrophobic recovery
- Good acid rain resistance
- High thermal conductivity
- Low application cost
- Maintenance-free service life
- Long proven history

TECHNICAL DATA SHEET

It protects against flashover contamination: salt, coal dust, cement dust, sugar cane carbon, fly ash, bird droppings/streamers, cooling towers and others.

The coating will eliminate:

- Regular insulator washing
- Period re-application of grease
- Replacement of components damaged by flashovers
- Repair silicone sheds and rod damage on composite insulation systems

It is supplied ready-to-use without the need of additional thinning or excessive mixing/ shaking before use.

Midsun HVIC G W/ATH is the only coating offered that allows for energized application. Midsun custom formulate our silicone coating to create an optimal flashover protection coating that can be applied on live apparatuses.

Over its greater than 30 years of application service history, Midsun HVIC G W/ATH has distinguished itself from its competition by virtue of flawless performance without a single failure of any type. For superior suppression of leakage current and an untarnished service life greater than that of any other HVIC, turn to Midsun Group Inc.

PRODUCT EXPLANATION

Midsun HVIC G W/ATH is part of Midsun HVIC RTV Coatings. This specific formulation contains Alumina trihydrate (ATH) as a filler. Midsun HVIC G W/ATH is a one-part room temperature vulcanising (RTV) silicone coating providing long term, maintenance free, flashover protection of high voltage insulators in polluted environments, with high resistance to corona, ultraviolet light, water erosion, atmospheric and chemical degradation.

INTENDED USAGE

- On glass, porcelain and composite insulators to improve surface dielectric properties
- On lines and station insulators, as well as bushing, instrument transformers and related. / Other applications requiring arc resistance such as barrier boards used in switch gear and in large motors
- To use in a wide variety of pollution areas including, but not limited, salt spray, salt fog, industrial (cement dust, fly ash, carbon black, acid emissions.) and desert sand.

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TECHNICAL PROPERTIES

Part Number	S2622MMS
Appearance	Paint
Filler	Alumina trihydrate (ATH)
Viscosity	2100/2700 cP (DIN EN ISO 3219)
Flash Point Temp.	105 °F / 40.5° C
Solids % (by volume)	66.75/71.55%
Solvent	Mineral Spirits
Dielectric Strength	35.9 Kv/mm; 915 V/mil [ASTM D149]
Dissipation Factor	@100KHz, 0.021 [ASTM D150]
Volume Resistivity (ohm.cm)	9x1014 [ASTMD257]
Dielectric Constant	@100 Hz: 3.85 [ASTM D150]
Thermal Conductivity	0.52 W/m °C to 0.59 W/m °C
Dry Arc Resistance, track and burn out (sec)	Track, 200 sec; Burn-out 450 sec
Tracking & Erosion Resistance	>1000 hrs [CEA LWIWG-01]
Specific Gravity	1.26/1.278
Density	11.4/pail
Application Temperature Range	32-130 °F (0-60 °C)
UV & Salt Fog Weathering	No degradation [IEC 61109, 5,000 hours]
Inclined Plane Tracking & Erosion	PASS (High Performance): 1A 4.5; 1B 4.5 [IEC 60587]
Adhesion Testing	Water Blast Test: PASS High Performance [IEEE 957] 100 hrs Boiling Water Test: PASS High Performance [CEA LWIWG-02]
Water Repellency Angle	118°±3° (TS 6073)
Hydrophobicity Recovery within 48 hrs (REC76/2006); (CPRI Test)	to H2 or better
H-VH Pollution tests passed as per Eskom specs 34- 224 and 34-217	Yes
Theoretical Coverage	Min. 1.79 m^2/liter
Est. Skin-over time	@25 C, 50% relative humidity, 15 min
Est. Tack-free time	@25 C, 50% relative humidity, 30 min
Usable Temperature	-40 -300° F (-40 to 148 °C)
Color	Gray (Custom colours available)
Weight per gallon	10.40/10.7
Storage & Temperature	1 year <77 °F (25° C) *

*Store properly out of sun, under dry conditions away from heat sources

APPLICATION

The insulation surface to be coated must be clean and dry. All surfaces to be coated should be free of dirt, dust, grease, oil, release agents, curing compounds, and other foreign matter including frost. In addition, prior to applying the coating, all surfaces must be dry. Such precaution will ensure proper adhesion of the Midsun HVIC w/ATH to the insulator surface.

In most instances, only a water wash followed by a naphtha, IPA or acetone solvent wipe will be needed. In some instances, like insulators in cement plants and other heavily polluted environments, dry blasting with corn cob or walnut shell may be needed.

Dry blasting is also recommended for insulators previously greased. Contact Midsun Group, Inc. for recommended practice, turnkey blasting and coating services.

Methods of coating insulators include brushing, dipping and spraying. When only a few insulators need to be coated, aerosol spray cans are the recommended method. Usually one to three coats in enough to obtain the recommended minimum thickness of 15 mils (0.015 inches).

When the entire substation is to be coated, spraying is the recommended approach. Spray equipment varies considerably in design and depending on the equipment used, two or three coats may be necessary to obtain the desired thickness. Each coat can be applied as soon as previous coat becomes tacky.

This can be up to 15 minutes depending on the ambient temperature and humidity. The liquid surface on coated insulators dries to the touch in approximately 40 minutes and reaches complete cure in several hours. Midsun Group provides this service at a very cost-effective rate.

Regarding humidity, the coating should not be used in environments of 100 % RH but can be used continuously at 60 % RH. After 72 hours of curing, handling and installation of coated insulators shall not be performed under the following conditions: humidity value above 60% or fog/rain. In some cases, this might affect the coating. Providing that the coating is damaged, the coated insulators shall rest for 12 hours under dried conditions prior to handling. It shall be pointed out that neither the humidity nor the scratches will affect the performance of the coating in terms of flashover protection and hydrophobicity recovery, the main features of RTV coating.

Applications are performed by Midsun Group trained technicians which guarantees top quality work and allows for warranties to be offered for most projects. Midsun HVIC w/ ATH can be applied with no voltage limit.

SAFETY NOTES

Midsun HVIC w/ATH uses a neutral cure system, so no acetic acid fumes or objectionable by products are evolved during application. On direct contact, uncured sealant may irritate eyes. Flush with water and call a physician.

This product is intended for use only by professional applicators in industrial situations in accordance with the advice given in this document, the Material Safety Data Sheet (SDS) and the container(s), and should not be used without reference to the SDS that Midsun Group Inc. has provided to its customers.

All work involving the application and use of this product should be performed in compliance with all relevant national, Health, Safety & Environmental standards, and regulations.

If in doubt regarding the suitability of use of this product, consult Midsun Group Inc. for advice.

Midsun HVIC is supplied in aerosol cans, ¼ gallon cans, 1-gallon cans, 5-gallon pails, and 55-gallon drums. package sizes. For availability of other Midsun please contact Midsun Group Inc.

When stored in original unopened container below 25°C (77°F) has a shelf life of 12 months from the date of shipment. Prior to any application, the material shall be thoroughly stirred before using it. The material shall be stored out of sun, under dry conditions away from heat.