

Technical Data Sheet VIRIDYN RF

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3.0	21-Aug-2025	Date of first issue:	27-Jul-2020

OVERVIEW

Type

RF-transparent, hydrophobic & oleophobic hydrocarbon siloxane nano-coating for SATCOM systems, including flat-panel antenna.

Features & Functionality

VIRIDYN RF is an RF-transparent wipe-on coating system for SATCOM systems and Flat-Panel Antennas. VIRIDYN RF is designed to be applied with maximum ease on the factory floor and in the field for maintenance.

VIRIDYN RF is hydrophobic and oleophobic. VIRIDYN RF cures to a transparent, smooth, low-surface energy hard shell with good abrasion resistance. It is PFAS-free and impermeable to gas and corrosive pollutants. RF adheres well to most metals, plastics, and glass. It does not alter the color of substrates.

Application

1. Clean surface of dust, oils, and debris (can use isopropyl alcohol, Windex, etc.)
2. Apply drops to applicator until wet.
3. Wipe coating onto device with *horizontal* movements. Surface should appear wet.
4. Rewet applicator if necessary.
5. Wipe coating onto device with *vertical* movements top to bottom.
6. Air dry (60 minutes to 24 hours).

Can also be applied by spray method.

Testing Summary

Film Hardness Testing: VIRIDYN RF was tested on 200 µm plastic (PMMA) substrates. The substrate was first plasma cleaned. The sample was rod coated with VIRIDYN RF to a wet film thickness of 7.5µm. The coated plastic was left to cure at room temperature for over 12 hours. Pencil hardness tests were carried out with a MXBAOHENG pencil hardness test kit and Staedtler Mars Lumograph calibrated pencil set.

500 grams weight pencil:	7-8H Hard
750 grams weight pencil:	6H Hard
1000 grams weight pencil:	4H Hard

SOLUTION PROPERTIES

Chemistry	Hydrocarbon siloxane
Form	Liquid
Color	Clear - lightly turbid
Solvent options	Ethyl Acetate, Tert Butyl Acetate, or AS300
Solids percent	4% to 40%
Specific gravity	0.8 g/ml
Flammability risk	Solvents Ethyl Acetate and Tert Butyl Acetate are flammable. AS300 is not flammable
Soluble in Water	No
Dry film toxicity	Non-toxic and non-flammable
Package options	100 grams in 4 oz. bottle 800 grams in liter bottle 3000 grams in gallon bottle

COATING PROPERTIES

Temperature stability	>500°C
Odour	Dry film has no odour
Film Hardness	7H – 9H pencil lead hard
Refractive Index	~1.4
Water contact angle	>110°
Water roll-off	<40° roll-off angle
Mineral oil contact angle	>20°
Mineral oil roll-off	<5° roll-off angle
UV light resistance	No yellowing observed

IDENTIFICATION

Product name

VIRIDYN RF

MANUFACTURER or SUPPLIER'S DETAILS

Company name of supplier

ViriDyn LLC
www.viridyn.com
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