

Product Description

Godfrey & Wing's 95-1000AA is a new high performance thermal curing impregnation sealant designed to seal porosity in cast and powdered metal components like its predecessor, 95-1000A. The new 95-1000AA was specifically formulated to deliver high heat resistance in a cost effective blend of quality monomers yet deliver the safe, environmentally friendly handling of sealant and rinse waters. 95-1000AA is easily washed from the surface of components and is completely removed by city or de-ionized water. Once polymerized the hardened resins exhibit superior chemical resistance and elevated temperature stability. Components may be tested or assembled immediately after impregnation as 95-1000AA cures in the presence of heat (thermal transfer), to form a durable thermoset polymer.

Product Certification

MIL-I-17563 Rev. C – Class 1 and 3

Typical Applications

95-1000AA was designed with a low viscosity, which allows it to quickly and effectively penetrate microporosity in aluminum and magnesium along with other cast or pressed alloys. 95-1000AA may also be used to seal composite materials, carbon and graphite. Fields of use include power transmission, hydraulics, fuel delivery systems, pneumatics, automotive and heavy transport. 95-1000AA is inherently stable and resistant to most chemicals. Proven through extensive product testing and field trials from North America to Asia, 95-1000AA is quickly becoming the sealant of choice in the vacuum impregnation industry

Typical Properties (Uncured)	Value
Chemical Type	Methacrylate blend
Appearance	Amber florescent liquid
Viscosity	10 cps or mPas @22 C (72 F)
Density	1.030 gms/cc @ 22° C (72° F)
Surface Tension	32.8 dynes/cm or mN/m
Flash Point	>110° F (>230° C)
Vapor Pressure	<1mm Hg

Typical Properties (Cured)	Value
Hardness, Shore D	70
Density	1.17 gms/cc 22° C (72° F)
Coefficient of Thermal Expansion	4.3 x 10 ⁻⁴ in/in/°C
Compressive Strength	8467 psi
Compressive Modulus	13880 psi
Operating Temperature °C (°F)	-40° C to 207° C (-40° F to 450° F)



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Directions for Use

Unless otherwise specified, it is recommended that all heat treating, welding, brazing and machining operations are performed prior to the impregnation process. Part to be impregnated should be clean and free of oils and other machining compound. Any surface treatment such as powder coating, E-coating, anodizing, plating or chem film treatment should be applied post impregnation process.

A variety of impregnation methods may be employed effectively depending on the part to be sealed, including but not limited to:

Wet vacuum (Mil-Std-276A method C)

Dry Vacuum Pressure (Mil-Std-276A method B)

Immediate post impregnation, the part should be allowed to drain and or centrifuged to remove all excess sealant from the part surface.

The part should next be washed in an aqueous solution to remove excess sealant and allowed to drain from all ducts, vents and pockets.

The curing process can be initiated either by placing the part in water at 90 °C +/- 5 °C (194 °F +/- 8 °F) for a period of 3 - 10 mins. Or utilizing hot air at 100 °C +/- 5 °C (212 °F +/- 8 °F) ≥ 60 mins. Note that these are general recommended times and will vary depending on the substrate, wall thickness and overall part dimension.

Chemical/Solvent Resistance

95-1000AA complies with all requirements of MIL-I-17563 Rev. C and also exhibits excellent resistance to a wide range of acids, caustics, hydrocarbons and solvents. Please contact your Godfrey & Wing Sales Engineer for specific chemical or solvent compatibility.

General Information

This product is not recommended for use in pure oxygen and/or oxygen rich systems. For safe handling information on this product, consult the Material Safety Data Sheet (MSDS).

Disposal of Waste

Any effluent generated from the rinse waters in the impregnation process may, in general, be disposed of in accordance with the municipal waste water regulations or treated within existing in-plant WWT facilities. Studies on the aerobic biodegradability of the sealant according to EN ISO 9888 show 97% biodegradability after 13 days.

Storage

95-1000AA should be stored in a cool, dry location out of direct sunlight at a temperature between 40 °F to 80 °F (4 °C to 27 °C) unless otherwise labeled. Initiated 95-1000AA in an impregnation system has unlimited pot life if recommended procedures are followed, including control of sealant temperature.



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Impregnation Equipment & Sealants

Godfrey & Wing designs and manufactures a complete line of innovative vacuum impregnation equipment and sealants. All impregnation systems are engineered to maximize productivity, economize sealant usage and conserve resources. The impregnation sealants are field-tested and proven over decades of use. We support our sealant and equipment with a global network of factory-trained technicians and process engineers, enabling our customers to optimize their impregnation equipment, sealants and processes.

*For more information, contact Godfrey & Wing at 1-800-241-2579
or visit www.godfreywing.com*

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