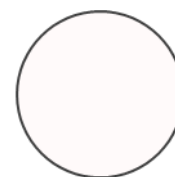


AMPRO™ SEAL CLR

HIGH CLARITY EPOXY BINDING PRIMER

- For sealing & priming porous surfaces
- Ideal for clear coating applications
- Eposeal re-engineered, with improved health & safety
- 3 : 1 mix ratio by volume
- Available with Fast and Slow hardeners
- No surface residue after cure
- Can be used to dilute other AMPRO™ systems



Cured Resin Colour

INTRODUCTION

AMPRO™ SEAL CLR is a solvent-free, low viscosity epoxy resin sealer. It has been developed primarily for use on wood but can also be used on other materials such as GRP, stone, ferrocement, brick, etc.

AMPRO™ SEAL CLR has a low viscosity which ensures that the product achieves rapid and deep penetration of porous surfaces. Once AMPRO™ SEAL CLR has soaked into a surface, the adhesive nature of the epoxy base will help to consolidate and strengthen that surface. The resultant epoxy sealing layer provides a high adhesion and moisture resistant base for any type of paint, varnish or epoxy coating system. For example, many woodworking applications combine the penetrating power of the AMPRO™ SEAL, with the thick, clear coating capability of AMPRO™ CLR to produce a strong, highly protective, deep gloss surface on wood.

AMPRO™ SEAL CLR can also be used as a viscosity modifier in conjunction with the full AMPRO™ range. AMPRO™ is a simple to use, all-purpose epoxy which can be used for gluing, coating, laminating and filling. With its fast, low temperature curing hardener and easy 3:1 mix ratio by volume, AMPRO™ provides a quick and convenient way of using one epoxy system for a very wide range of tasks.

AMPRO™ has been built on the well-established SP 106 which has been the primary epoxy system for the manufacture and repair of wooden boats for over 20 years.

SYSTEM PROPERTIES AT 25°C		MIXED VISCOSITY*	150g POT-LIFE*	TACK-OFF TIME*	EARLIEST SANDING TIME*	PAGE
AMPRO™ SEAL Resin	Product Information, Instructions for Use and Health & Safety					2
	AMPRO™ CLR Fast Hardener	270 cP	½ hour	3 hours	16 hours	3
	AMPRO™ CLR Slow Hardener	270 cP	½ hour	3 hours	16 hours	4

**working time properties are highly subjective to ambient conditions and should be used as an approximate guideline for all AMPRO™ systems at 20°C. Please refer to the corresponding page of this document for specific testing methods used.*

PRODUCT INFORMATION

AVAILABILITY

The product is available in a number of formats please contact your local customer support or download the latest product catalogue available on www.gurit.com.

TRANSPORT & STORAGE

The resin and hardeners should be kept in securely closed containers during transport and storage. Any accidental spillage should be soaked up with sand, sawdust, cotton waste or any other absorbent material. The area should then be washed clean (see appropriate Safety Data Sheet). Adequate long term storage conditions will result in a shelf life of 2 years. Storage should be in a warm dry place out of direct sunlight and protected from frost. The storage temperature should be kept constant between 10°C and 25°C, cyclic fluctuations in temperature can cause crystallization. Containers should be firmly closed. Hardeners, in particular, will suffer serious degradation if left exposed to air.

COMPONENT	UNITS	10 – 25°C
AMPRO™ SEAL Resin	months	24
AMPRO™ CLR Hardeners	months	24

INSTRUCTIONS FOR USE

The product is optimised for use at temperatures between 15 to 25°C. At lower temperatures the product thickens & may become unworkable, however it's designed to cure at temperatures as low as +5°C. Above 25°C working times will be significantly reduced. Maximum relative humidity for use is 70%.

MIXING AND HANDLING

Accurate measurement and thorough mixing are essential when using this system, and any deviation from the prescribed mix ratios will seriously degrade the physical properties of the cured system. The resin and hardener must be stirred well for two minutes or more, with particular attention being paid to the sides and bottom of the container. As soon as the material is mixed the reaction begins. This reaction produces heat (exothermic), which will in turn accelerate the reaction. If this mixed material is left in a confined mixing vessel the heat cannot disperse and the reaction will become uncontrollable. It is therefore advised that the material is used immediately or transferred to a shallow wide-bottomed container like a paint tray which will extend the working time, this is more important with this product than other products in our range.

SURFACE PREPARATION

All surfaces should be clean, dry and dust-free. Prior to application all surfaces should be thoroughly abraded with medium grit paper, dust removed then wiped with Solvent such as acetone. Do not use on top of enamel or other single component coatings. Use only on bare uncoated surfaces. Do not use White Spirit or oil-based cleaners prior to coating as adhesion will be impaired. Some materials e.g. metals, may require a special pretreatment to ensure the best coating adhesion - please refer to Gurit's Bonding Guide.

COATING

AMPRO™ SEAL CLR is a solvent-free product and so can be over coated with other solvent free products like AMPRO™, AMPRO™ BIO or AMPRO™ CLR more rapidly than the Eposeal 300 which is a solvent based product. AMPRO™ SEAL replaces Eposeal with a number of benefits, including:

- 3 coats of AMPRO™ SEAL CLR will achieve a stable substrate, compared to 6-8 coats of Eposeal
- Subsequent coats of AMPRO™ SEAL CLR can be applied after just 3 hours at 20°C without sanding
- AMPRO™ SEAL CLR is solvent-free and will be fully hardened overnight ready for over-coating or top-coating

AMPRO™ SEAL CLR is most suited for coating applications and due to its low viscosity can require 2 to 3 coats are required to fill wood grain. Coats can be applied in succession without sanding but the previous coat should be allowed to reach a tacky stage first. If overcoating with other products in Ampro range the AMPRO™ SEAL CLR must have been allowed to cure for 16 hours at 20°C and sanded prior to application. If exposed to sunlight the product should be painted or coated with a varnish which includes UV filter or blockers

SEALING

Wood components that are to be subsequently glued can be pre-coated with one coat of AMPRO™ SEAL CLR before bonding. However, AMPRO™ SEAL CLR coated surfaces must be cured and then abraded thoroughly with dry 120 grit paper before bonding.

DILUTING

AMPRO™ SEAL can also be used to reduce the viscosity of other AMPRO™ resins to improve the wet-out of heavy weight fabrics. It is recommended that the AMPRO™ or AMPRO™ BIO resins are substituted with up 20% of AMPRO™ SEAL by volume. Note that this may result in drainage on vertical surfaces and a slower cure time than that stated, although the pot-life is unlikely to be affected.

COVERAGE

THICKNESS (PER COAT)	COVERAGE	COMMENT
Coating Coverage (at 50 - 100 microns)	Approximately 14 m ² /kg	Dependant on temperature, surface inclination, surface porosity and evenness

HEALTH AND SAFETY

The following points must be considered:

1. Skin contact must be avoided by wearing protective gloves. Gurit recommends the use of disposable nitrile gloves for most applications. The use of barrier creams is not recommended, but to preserve skin condition a moisturising cream should be used after washing.
2. Protective clothing should be worn when mixing, laminating or sanding. Contaminated work clothes should be thoroughly cleaned before re-use.
3. Eye protection should be worn if there is a risk of resin, hardener, solvent or dust entering the eyes. If this occurs flush the eye with water for 15 minutes, holding the eyelid open, and seek medical attention.
4. Ensure adequate ventilation in work areas. Respiratory protection should be worn if there is insufficient ventilation. Solvent vapours should not be inhaled as they can cause dizziness, headaches, loss of consciousness and can have long term health effects.
5. If the skin becomes contaminated, then the area must be immediately cleansed. The use of resin-removing cleansers is recommended. To finish, wash with soap and warm water. The use of solvents on the skin to remove resins etc must be avoided.
Washing should be part of routine practice: before eating or drinking; before smoking & vaping; before using the lavatory; after finishing work
6. The inhalation of sanding dust should be avoided and if it settles on the skin then it should be washed off. After more extensive sanding operations a shower/bath and hair wash is advised.

APPLICABLE RISK & SAFETY PHRASES

Gurit produces a separate full Safety Data Sheet for all hazardous products. Please ensure that you have the correct SDS to hand for the materials you are using before commencing work.

AMPRO™ SEAL & AMPRO™ CLR FAST HARDENER

MIXING AND HANDLING

PROPERTY	UNITS	AMPRO™ SEAL RESIN	CLR FAST HARDENER	MIXED SYSTEM
Colour	-	Clear / Colourless	Clear / Colourless	Clear / Colourless
Mix ratio by weight	Parts by weight	100	30	-
Mix ratio by volume	Parts by volume	3	1	-
Density at 21 °C (ISO 1183-1B)	g/cm ³	1.09	1.04	1.08

COMPONENT & MIXED SYSTEM PROPERTIES*

PROPERTY	UNITS	25 °C	TEST METHOD
AMPRO™ SEAL Resin Viscosity	cP	115	-
AMPRO™ CLR Fast Hardener Viscosity	cP	620	-
Initial Mixed System Viscosity	cP	230	-

WORKING TIME PROPERTIES*

PROPERTY	UNITS	20 °C	TEST METHOD
Pot-life (150 g, mixed in water)	hrs:min	00:30	Tecam Gel Time
Tack-off Time	hrs:min	03:00	Internal Gurit Method
Earliest Sanding Time**	hrs:min	16:00	Internal Gurit Method

*working time properties are highly subjective to ambient conditions and should be used as an approximate guideline for all AMPRO™ systems

**it is not recommended to apply at low temperatures, but is possible to be sanded after 24 hours at cure temperatures as low as +5°C

AMPRO™ SEAL & AMPRO™ CLR SLOW HARDENER

MIXING AND HANDLING

PROPERTY	UNITS	AMPRO™ SEAL RESIN	CLR SLOW HARDENER	MIXED SYSTEM
Colour	-	Clear / Colourless	Clear / Colourless	Clear / Colourless
Mix ratio by weight	Parts by weight	100	30	-
Mix ratio by volume	Parts by volume	3	1	-
Density at 21 °C (ISO 1183-1B)	g/cm ³	1.09	1.01	1.07

COMPONENT & MIXED SYSTEM PROPERTIES*

PROPERTY	UNITS	25 °C	TEST METHOD
AMPRO™ SEAL Resin Viscosity	cP	115	-
AMPRO™ CLR Slow Hardener Viscosity	cP	232	-
Initial Mixed System Viscosity	cP	142	-

WORKING TIME PROPERTIES*

PROPERTY	UNITS	20 °C	TEST METHOD
Pot-life (150 g, mixed in water)	hrs:min	01:15	Tecam Gel Time
Tack-off Time	hrs:min	04:00	Internal Gurit Method
Earliest Sanding Time**	hrs:min	16:00	Internal Gurit Method

*working time properties are highly subjective to ambient conditions and should be used as an approximate guideline for all AMPRO™ systems

**it is not recommended to apply at low temperatures, but is possible to be sanded after 24 hours at cure temperatures as low as +5°C

NOTICE

All advice, instruction or recommendation is given in good faith but the selling Gurit entity (the Company) only warrants that advice in writing is given with reasonable skill and care. No further duty or responsibility is accepted by the Company. All advice is given subject to the terms and conditions of sale (the Conditions) which are available on request from the Company or may be viewed at Gurit's Website: www.gurit.com/terms-and-conditions.aspx

The Company strongly recommends that Customers make test panels in the final process conditions and conduct appropriate testing of any goods or materials supplied by the Company prior to final use to ensure that they are suitable for the Customer's planned application. Such testing should include testing under conditions as close as possible to those to which the final component may be subjected. The Company specifically excludes any warranty of fitness for purpose of the goods other than as set out in writing by the Company. Due to the varied nature of end-use applications, the Company does, in particular, not warrant that the test panels in the final process conditions and/or the final component pass any fire standards.

The Company reserves the right to change specifications and prices without notice and Customers should satisfy themselves that information relied on by the Customer is that which is currently published by the Company on its website. Any queries may be addressed to the Technical Services Department.

Gurit is continuously reviewing and updating literature. Please ensure that you have the current version by contacting your sales contact and quoting the revision number in the bottom left-hand corner of this page.

TECHNICAL CONTACT INFORMATION

For all other enquiries such as technical queries:

Telephone + 44 1983 828000 (08:30 – 17:00 GMT)
Email technical.support@gurit.com

24-HOUR CHEMICAL EMERGENCY NUMBER

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