



Water Clear Epoxy Resin 1:1

1. Introduction

Water Clear Part A epoxy resin reacts at a 1:1 volume ratio with Part B hardener to form a water clear epoxy.

2. Applications

1:1 Water Clear Epoxy has been formulated for use in flower setting and embedding applications. The long pot life of the mixed system allows for bubble-free castings to be produced. In addition the lack of exotherm ensures glass containers and vases are not damaged, and eliminates separation of the epoxy from the internal wall.

3. Specification

Property	Minimum	Maximum	Units
Gel Time (100g 20°C)	12	24	Hours
Full Cure (100g 20°C)	7	10	Days

4. Mix Ratios

By Weight: 1.20 parts A to 1.00 part Part B

By Volume: 1.00 parts A to 1.00 part Part B

The components should be measured to an accuracy of 2% or better. Care should be taking when measuring by volume as this is an inherently inaccurate method unless specific volumetric measuring equipment is used.

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5. Typical Properties

Property		Typical Value	Units
Colour	Part A	Clear liquid	-
	Part B	Clear liquid	-
	Mixed	Water Clear	-
S.G.	Part A	1.1	-
	Part B	1.05	-
	Mixed	1.1	-
Gel Time (100g 20°C)		16	Hours
Full Cure (100g 20°C)		7	Days

6. Preparation of Components

Neither component requires preparation prior to use, and may be used directly from the tin.

The components may be mixed and cast at room temperature and require no pre-warming prior to use. If the mould needs to be pre-warmed details will be given in the PREPARATION OF MOULDS section. If the product requires a postcure details will be given in the METHOD OF USE section.

7. Preparation of Containers

Containers should be clean and dry and should require no pre-warming, though if ambient conditions are particularly cold then warming to a temperature of 15-20°C will assist the cure of the material. Be aware that cold temperatures will result in longer cure.

8. Method of Use

Weighing

For consistent results the components should be weighed on equipment capable of an accuracy of $\pm 2\%$ or better. The products should be weighed into a vessel of sufficient capacity to accommodate the entire mix and allow room for mixing, and degassing if required.

All components should be weighed directly into one vessel. Do not weigh each component into a separate vessel and then combine them, as this will not give the desired mix ratio due to losses and wastage in each container. In turn this will lead to cure problems such as incorrect cure time or hardness.

Mixing

The components should be mixed together thoroughly by hand use a flat blade such as a palette knife or with a Jiffy type mixer if using a drill. The mixing should be carried out with care to avoid the inclusion of air and also to ensure that material on the sides and bottom of the vessel is removed and mixed in.

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To avoid patches of unmixed components in the finished product the mixed material may then be transferred to a second container and mixed again.

Degassing

Degassing is not normally necessary with this product, but if required should be done immediately after mixing.

The degassing chamber should be large enough to accommodate the mixing vessel and the vacuum pump should ideally be able to create sufficient vacuum in the chamber to start degassing within one minute. Once the violent bubbling ceases degassing is complete for most applications. Further degassing removes only a tiny proportion of air and is only necessary in critical applications.

Please note that increasing the quantity of mix or working at higher ambient temperatures (eg. in the summer) can reduce the pot life of the material. Where possible trials should be carried out to establish these parameters.

Pouring

When casting care during pouring is essential to avoid entrapped air. Pour the material slowly allowing it to flow gently around the items to be encapsulated from the bottom up.

Take care not to scrape the sides of the mixing vessel to remove the last of the product. This very frequently results in an undercured or soft area in the finished product.

Postcure

This material will cure at ambient temperatures and post-curing at elevated temperature is not necessary.

9. Handling and Storage

The relevant Safety Data Sheets should be read carefully before using this material.

Good housekeeping is important with this material as with all chemicals. Spillages should be wiped up immediately and containers wiped clean after use.

The components should be stored in their original containers in a dry place at 5-25°C.

Both components have a minimum shelf life of 12 months from the date of manufacture when stored correctly in unopened containers.

10. Health and Safety

The Safety Data Sheet provides information on the health and safety aspects of this material. Please contact TOMPS if you do not have a Safety Data Sheet for each of the components of this material.

The Part A epoxy resin component is classified as IRRITATING to eyes and skin according to the requirements of the CHIP regulations. In addition it may cause sensitisation by skin contact. Care should be taken to avoid direct contact and gloves, goggles and impervious overalls should be worn.

The Part B hardener is classified as CORROSIVE. Part B is harmful in contact with skin and if swallowed, causes burns and may cause sensitisation by skin contact. Avoid direct contact by means of gloves, goggles and impervious overalls.

11. Suitability for Use

The information in this datasheet is given to the best of our knowledge and belief but without warranty or liability.

The user must establish the suitability of the material for the intended application by carrying out any appropriate tests.

Finished products produced from any batch of our materials must be subjected to comprehensive standards of quality control by the user.

12. Additional Information

No liability will be accepted for direct or consequential losses arising from the use of this material. However any comments or suggestions relating to improving the processing or characteristics of this material will be very welcome.