

Araldite® CW 8771/Hardener HW 8771

Epoxy Encapsulation System

Typical Properties

(Not for specification purposes. All tests run at 25°C unless otherwise noted)

Resin / A-side Properties:

Appearance	Visual	Liquid Black
Specific Gravity	ASTM D-792	1.47 g/cm ³
Viscosity	ASTM-D-2393	7,100 cP
Flash point, closed cup	ASTM D-92	>200°C (392°F)

Hardener/ B-side Properties:

Appearance	Visual	Liquid Amber
Specific Gravity	ASTM-D-792	1.47 g/cm ³
Viscosity	ASTM-D-2393	15,600 cP
Flash Point, closed cup	ASTM D-92	>194°C (381°F)

Mix Ratio:

Parts by weight (volume) 100A : 100B (100A:100B)

Mixed Properties:

Initial Viscosity @ 25°C	ASTM-D-2393,	12,000cP
Gel time, 10 gram mass, @ 65°C		11 minutes
Pot-life @ 25°C	OC-WL-001	100 minutes

Recommended Cure Schedules:

24 hrs at 25°C or 1 hrs at 65°C

Please note: any cure schedule selected for use should be confirmed through testing as being appropriate for your particular processing methods and for your intended application.

Cured Properties (cured 7 days at 25°C)

Appearance	Visual	Black
Specific Gravity	ASTM D-1475	1.47 g/cm ³
Shore Hardness	ASTM D-2240	80D
Volume Shrinkage	ASTM D-792	2.84%
Tensile Strength at break	ASTM D-638	1.400 psi
Elongation at break	ASTM D-638	17%
Water absorption	ASTM D-570	0.27% by weight
Glass Transition Temp (Tg)	Perkin Elmer Appl. Cast #20	30°C
Coefficient of thermal expansion (CTE) (per °C)	ASTM E-381	
Alpha 1 (<5°C)		6.1 x 10 ⁻⁵
Alpha 2 (<5-125°C)		14.0 x 10 ⁻⁵
Thermal Conductivity	ASTM D-2214	14.8 x 10 ⁻⁴
Flame retardance	UL 94 V-O	Passed
Volume. Resistivity	ASTM D-257	3.90 x 10 ¹⁵ Ω-cm
Surface Resistivity	ASTM D-257	2.1 x 10 ¹⁵ Ω-cm
Dielectric Strength	ASTM D-149	425 volts/mil
Dielectric Constant, 60 Hz	ASTM D-150	5.47
Dissipation Factor, 60 Hz	ASTM D-150	0.0648

ARALDITE® CW 8771 with HARDENER HW 8771 is a black, flame retardant general-purpose epoxy encapsulant. This toughened system has good air release, and is designed for either hand or meter-mix processing. It is excellent for many encapsulating, potting embedding, and sealing applications.

Suggested Applications:

- Convenient One to One Mix Ratio by weight and volume
- Good air release
- Low viscosity
- Halogen free
- Flame retardant, UL 94 V-O

Benefits:

This product provides the end-user with a user friendly encapsulating system, which allows the use of many different processing techniques. This combination of processing characteristics allows manufacturers to produce components economically, and with reproducible quality.

Storage Guidelines:

Store this material in a clean, dry environment in its tightly closed original container. These products are not considered temperature sensitive, but should ideally be stored at temperatures between 18-30°C (64-86°F). Under these conditions the products will have a minimum shelf-life of 12 months from the date of shipment

Processing Guidelines:

Mix using Meter-mix dispensing, or manually, as follows. Weigh the desired amount of resin into mixing container whose weight has been tared. If material has been heated, allow to cool to 25 ± 5°C or 77 ± 9°F before continuing. The pot life of mixed material will be shortened considerably if warmed material is used.

Weigh the desired amount of hardener into mixing container with resin. Mix thoroughly by means of mechanical mixer or manual stirring. Check for uniform color as a sign of complete mixing. Vacuum deairing is recommended to remove any entrapped air from the mixing procedure. To deair most products, 1-2 minutes under full vacuum is

recommended for each quart of volume of mixed material. Quickly dispense potting material into cavity or channel to be sealed; be certain not to trap air bubbles as viscosity builds.

To reduce the cure time, the casting is often allowed to gel at room temperature and then post-cured 2-6 hours at 60-80°C. Small casting can be processed and directly cured at slightly higher temperatures (40-60°C). In case of humid environments ($\geq 75\%$ relative humidity) it is advisable to effect a full cure in an oven at 40-60°C in order to prevent vapor absorption, leading to specks on the surface of the casting.

Handling Precautions:

Mandatory and recommended industrial hygiene procedures should be followed whenever these products are being handled and processed. For additional information please consult the corresponding material safety data sheets.

Personal Hygiene:

ARALDITE® CW 8771

Warning! May cause eye irritation. Prolonged or repeated skin contact may cause irritation, and may cause skin reaction. Harmful if inhaled, if swallowed. Avoid contact with eyes, skin, or clothing. Wear eye protection and impervious gloves when handling. Wash thoroughly after handling. Avoid breathing vapor or mist. Keep containers closed when not in use. Use only with adequate ventilation.

HARDENER HW 8771

CAUTION! Causes eye, skin, and respiratory irritations. Avoid breathing vapor or mist. Avoid contact with eyes, skin,, and clothing. Keep container closed when not in use. Use with adequate ventilation. Wash thoroughly after handling. In accord with good industrial practice, handle with due care.

First Aid

In case of contact:

Skin - Wash skin thoroughly with mild soap and water. Remove contaminated clothing and wash before reuse. Discard contaminated shoes and other articles made of leather

Eyes - Flush eyes with plenty of water for 15 minutes and get prompt medical attention.

Inhalation - Remove person to fresh air

Ingestion - Do not induce vomiting. Dilute with plenty of water and contact physician immediately. Never give anything by mouth to an unconscious person.

Other- Referral to a physician is recommended if there is any question about the seriousness of an injury.

Disclaimer:

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**Specialty Polymers & Services, Inc.
(SP&S)
27822 Fremont Court
Valencia, CA 91355**

**Tel - 661-294-1790
Fax - 661-294-0640**