

ARAVITE® CW 8731 / HARDENER HW 8731

APPLICATION: Aravite® CW 8731/Hardener HW 8731 is a black, low viscosity UV gelable, two-part acrylic modified epoxy potting compound formulated for general purpose potting and encapsulation of electrical and electronic components. It's convenient 1:1 (by volume) mix ratio makes it ideal for dispensing equipment. It offers good flexibility, environmental resistance and the capability of being cured in many different processes. This system is ideal for specialized high-speed productions.

FEATURES:

- UV gelable/R.T. curable
- 100% solids, solvent free
- Good flexible
- Multiple cure schedules possible
- Excellent impact resistance
- Excellent dielectric properties

BENEFITS: Aravite® CW 8731/Hardener HW 8731 allows the end-user flexibility in selecting a processing method. It is UV gelable which eliminates the need for long production lines or heat curing ovens. It will also heat cure for an even further reduction in production time. It's excellent adhesion characteristics allow the manufacturer a choice of a variety of cost-effective thermoplastic housings.

TYPICAL PROPERTIES:

	<u>Property</u>	<u>Test Method</u>	<u>Test Values</u>
Resin	Color/Appearance	Visual	Black
	Viscosity @ 25°C (cP)	ASTM D-2393	48,000-54,000
	Specific Gravity	ASTM D-792	1.16 - 1.20
	Flash Point (°C)	—	177
Hardener	Color/Appearance	Visual	Lt. yellow
	Viscosity @ 25°C (cP)	ASTM D-2393	2000 - 4000
	Specific Gravity	ASTM D-792	1.00 - 1.04
	Flash Point (°C)	--	200
Mixed	Gel Time (100 gms) (minutes)	ASTM D-2471	30
	Initial Mixed Viscosity (cP)	ASTM D-2393	30,000



RECOMMENDED

- CURE SCHEDULES:**
- A. Initiation w/300 W/cm² and one of the following postcures:
 - 1. 7 days @ 25°C or
 - 2. 2 hours @ 65°C
 - B. No UV exposure and one of the cure cycles above.

SHELF LIFE: Provided this material is stored under the recommended storage conditions in their original containers, Aravite CW 8731 will remain in useable condition for 6 months from date of shipment and Hardener HW 8731 will remain useable condition for one year from date of shipment.

MIXING INSTRUCTIONS:

Reaction Ratio 100R to 100H (by weight)
 100R to 100H (by volume)

- a) Meter/mix dispensing equipment.
- b) Manual mixing - Weigh the desired amount of Part A 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 Part B into mixing container with Part A. 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.

TYPICAL CURED PROPERTIES:

(UV initiated plus 2 hours at 65°C or 149°F)

<u>Property</u>	<u>Test Method</u>	<u>Test Values</u>
Hardness (Shore A)	ASTM D-2240	95
Volume Shrinkage (%)	ASTM D-792	4.0
Elongation at Break (%)	ASTM D-638	13.1
Tensile Strength at Break (psi)	ASTM D-638	993
Tg (°C)	per DSC	31.5
Coefficient of Thermal Expansion (in/in/°C)	ASTM E-381	18.2 x 10 ⁻⁵
Water Absorption (% by wt.) (24 hrs. @ 25°C)	ASTM D-570	5.58
Dielectric Strength (volts/mil)	ASTM D-149	400

RECOMMENDED

- CURE SCHEDULES:**
- A. Initiation w/300 W/cm² and one of the following postcures:
 - 1. 7 days @ 25°C or
 - 2. 2 hours @ 65°C
 - B. No UV exposure and one of the cure cycles above.
-

SHELF LIFE: Provided this material is stored under the recommended storage conditions in their original containers, Aravite CW 8731 will remain in useable condition for 6 months from date of shipment and Hardener HW 8731 will remain useable condition for one year from date of shipment.

MIXING INSTRUCTIONS:

Reaction Ratio 100R to 100H (by weight)
 100R to 100H (by volume)

- a) Meter/mix dispensing equipment.
- b) Manual mixing - Weigh the desired amount of Part A 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 Part B into mixing container with Part A. 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.

TYPICAL CURED PROPERTIES:
(UV initiated plus 2 hours at 65°C or 149°F)

<u>Property</u>	<u>Test Method</u>	<u>Test Values</u>
Hardness (Shore A)	ASTM D-2240	95
Volume Shrinkage (%)	ASTM D-792	4.0
Elongation at Break (%)	ASTM D-638	13.1
Tensile Strength at Break (psi)	ASTM D-638	993
Tg (°C)	per DSC	31.5
Coefficient of Thermal Expansion (in/in/°C)	ASTM E-381	18.2 x 10 ⁻⁵
Water Absorption (% by wt.) (24 hrs. @ 25°C)	ASTM D-570	5.58
Dielectric Strength	ASTM D-149	400

PACKAGING: Aravite CW 8731/Hardener HW 8731 is available in five-gallon meter-mix ready pails. This encapsulating system is also available in other package sizes, by special order. Please call Customer Service (800) 367-8793 for price and availability.

ENVIRONMENTAL INFORMATION:

Spills should be contained with absorbent materials and transferred to a closed container for disposal. Unreacted components should be handled carefully. Observe all precautionary statements that appear on the product labels. Users should investigate all applicable waste regulations and follow them closely when disposing of these materials.

SAFETY/HANDLING PRECAUTIONS:

Do not use or handle this product until the Material Safety Data Sheet has been read and understood.

Aravite® CW 8731

WARNING! CAUSES EYE, SKIN, RESPIRATORY IRRITATION.
MAY CAUSE SKIN AND PHOTO-SENSITIZATION.

AVOID CONTACT WITH EYES, SKIN, AND CLOTHING.
AVOID BREATHING VAPOR OR MIST.
WASH THOROUGHLY AFTER HANDLING.
KEEP CONTAINER CLOSED.
USE WITH ADEQUATE VENTILATION.

Hardener HW 8731

DANGER! CORROSIVE - CAUSES SKIN AND EYE BURNS.
HARMFUL IF ABSORBED THROUGH SKIN.
MAY CAUSE ALLERGIC SKIN REACTION.

DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING.
AVOID BREATHING VAPOR OR MIST.
KEEP CONTAINER CLOSED.
USE WITH ADEQUATE VENTILATION.
WASH THOROUGHLY AFTER HANDLING.

FIRST AID:

In case of contact, flush eyes with plenty of water for 15 minutes and get prompt medical attention; wash skin thoroughly with mild soap and water; remove contaminated clothing and wash before reuse. Discard contaminated shoes and other articles made of leather. In case of inhalation, remove person to fresh air. In case of ingestion, do not induce vomiting, dilute with plenty of water and contact physician immediately. Never give anything by mouth to an unconscious person.

IMPORTANT:

The following shall supersede any provision in your company's forms, letters and papers. **THERE IS NO WARRANTY OR CONDITION, WHETHER EXPRESS OR IMPLIED BY ANY STATUTE OR OTHERWISE, INCLUDING WARRANTIES AND CONDITIONS OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, FOR THE PRODUCT OR PRODUCTS REFERRED TO HEREIN.** While the information contained herein is believed to be reliable, Ciba makes no representations as to the reliability of the results or as to the results the buyer or user will achieve. No statements or recommendations herein are to be construed as representations applicable to the particular application of the user or buyer or as inducements to infringe any relevant patent, now or hereafter in existence. **UNDER NO CIRCUMSTANCES SHALL CIBA BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR OTHER DAMAGES FROM ALLEGED NEGLIGENCE, BREACH OF WARRANTY OR CONDITION, STRICT LIABILITY OR ANY OTHER LEGAL THEORY, ARISING OUT OF THE MANUFACTURE, SALE, USE OR HANDLING OF THE PRODUCT OR PRODUCTS REFERRED TO HEREIN.** The sole remedy of the buyer and the sole liability of Ciba for any claims shall be limited to the buyer's purchase price of the product which is the subject of the claim or the amount actually paid for such product, whichever is less. **TECHNICAL ADVICE FURNISHED BY SELLER SHALL NOT CONSTITUTE A WARRANTY OR CONDITION, STATUTORY OR OTHERWISE, WHICH IS EXPRESSLY DISCLAIMED, ALL SUCH ADVICE BEING GIVEN AND ACCEPTED AT THE BUYER'S RISK.**

The test data and results set forth herein are based on laboratory work and do not necessarily indicate results that the buyer or user will attain. Full-scale testing and product performance are the responsibility of the buyer and user.

Ciba-Geigy Corporation
Formulated Systems Group
4917 Dawn Avenue
East Lansing, Michigan 48823-5691
517-351-5900