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vantico

Product Data

ARALDITE® 2015

(AV 5308/HV 5309)

TOUGHENED ADHESIVE

DESCRIPTION:

Araldite 2015 is a two-component, room-temperature curing paste adhesive giving a resilient bond. It is Thixotropic and non-sagging up to 10 mm thickness. It is particularly suitable for SMC and GRP bonding. It is particularly suitable for SMC and GRP bonding.

APPLICATIONS:

- Metals
- SMC
- GRP

ADVANTAGES:

- Thixotropic
- Toughened adhesive
- Gap-filling, non-sagging up to 10mm thickness
- Suitable for SMC and GRP bonding
- High shear and peel strength

TYPICAL PROPERTIES:

Property	Test Method	Test Values[1] Resin	Hardener
Color/appearance	Visual	Neutral paste	Neutral paste
Specific Gravity	ASTM D-792	1.40	1.40
Viscosity (cP)		Thixotropic paste	Thixotropic paste

TYPICAL MIXED PROPERTIES:

Property	Test Method	Test Values[1]
Reaction Ratio (by weight)		100R/100H
Reaction Ratio (by volume)		100R/100H
Pot Life (minute) (4 fl. oz. mass)	ASTM D-2471	35
Mixed viscosity (cP)	ASTM D-2393	Thixotropic paste

RECOMMENDED CURE SCHEDULES:

Temperature	Handling Strength	Minimum Cure Time
50ºF (10ºC)	12 hours	21 hours
59º (15ºC)	7.5 hours	13 hours
77ºF (25ºC)	4 hours	10 hours
104ºF (40ºC)	1 hours	2 hours
158ºF (60ºC)	17 minutes	35 minutes
212ºF (100ºC)	6 minutes	7 minutes

TYPICAL CURED: PROPERTIES:

Application of Adhesive

The resin/hardener mix is applied with a spatula to the pretreated and dry joint surfaces.

A layer of adhesive 0.002 to 0.004 inches thick will normally impart the greatestlap shear strength to a joint.

The joint components should be assembled and clamped as soon as the adhesive has been applied. Even contact throughout suffices to ensure proper cure.

Standard Test Specimens

Unless otherwise stated, the figures given below were all determined by testing standard specimens made up by lap-jointing 4 x 1 x 0.06 inch strips of aluminum. The joint area was 0.5 x 1 inch in each case.

[1]Tested @ 77°F (25°C)

Property	Test Method	Test Values [1]
Lap Shear Strength (psi)	DIN 53283	
Effects of cure time and temperature		
Cure Cycle		
7 days @ 77ºF (25ºC)		3150
24 hours @ 77ºF (25ºC) + 30 min @ 176ºF (80ºC)		3300

Property		
Lap Shear Strength (psi)	DIN 53283	
Effect of Test Temperature		
(Load applied 10 minutes after specimens reach test temperature.)		
Cure Cycle	**Test Temp.**	
5 days @ 77ºF (25ºC)	-40ºF (60ºC)	3200
	32ºF (-20ºC)	3550
	68ºF (20ºC)	3200
	104ºF (40ºC)	2950
	140ºF (60ºC)	1900
	176ºF (70ºC)	1050
	212ºF (100ºC)	850
20 min @ 212ºF (100ºC)	-40ºF (-40ºC)	3250
	-4ºF (-20ºC)	3625
	68ºF (20ºC)	3300
	104ºF (40ºC)	2800
	140ºF (60ºC)	2400
	176ºF (70ºC)	1100
	212ºF (100ºC)	850

Property		
Lap Shear Strength (psi)		
Effect of Immersion		
(Cure cycle 16 hours @ 104ºF (40ºC). Immersion for 90 days in media listed.)		
Media		
Standard - As prepared		2600
IMS		1800
Gasoline		2300
Ethyl Acetate (30 days)		1800
Xylene		1900
Lubricating Oil - HD30		2900
Paraffin		2800
Water @ 68°F (20°C) (60 days)		1600
Water @ 194°F (90°C)		1700

[1]Tested @ 77°F (25°C)

Property		**Test Values**[1]
Lap Shear Strength (psi)		
Effect of Tropical Exposure		
(104ºF (40ºC)/92% R.H.)		
Cure Cycle	**Exposure Time**	
16 hrs @ 104ºF (40ºC)	0 days	2600
	30 days	2300
	60 days	2200
	90 days	2200
	Test Method	
Lap Shear Strength (psi)	DIN 53283	
Effect of Heat Aging		
(Cured 16 hours @ 104°F (40°C).		
Aging Temperature	**Exposure Time**	
158ºF (70ºC)	0 days	2600
	10 days	3100
	30 days	3000
	90 days	3350
Lap Shear Strength (psi)		
Tested on Metal Substrates		
(Cured 16 hours @ 104ºF (40ºC)		
Metal	**Substrate Thickness (mm)**	
Carbon Steel	1.0	2200
Stainless Steel	1.0	2800
Galvanized Steel[2]	1.5	1700
Copper	1.5	2600
Brass	1.5	2400
Lap Shear Strength (psi)		
Test on SMC		
(Cured 1 hour @ 176ºF (80ºC)		
Substrate		
SMC gray	4	1750
Low profile SMC white	4	1850
	Test Method	
Tg per DMA, °F (°C)	ASTM D-4065	181 (83)
Roller Peel Test (pli)	ISO 4578	25

[2]Surface degreased only, not roughened

[1]Tested @ 77°F (25°C)

STORAGE: HANDLING INFORMATION

Araldite 2015/A Resin and Araldite 2015/B Hardener
Store in tightly closed containers at room temperature in cool, ventilated area. Keep containers closed to prevent moisture absorption and contamination.

Work in a well ventilated area and use clean, dry tools for mixing and applying. For two component system, combine the resin and hardener according to mix ratio. Mix together thoroughly and use immediately after mixing. Material temperature should not be below 65°F (18°C) when mixing.

SHELF LIFE:

Provided this material is stored under the recommended storage conditions in their original containers, it will remain in useable condition for one year from date of shipping.

PACKAGING:

This product is available in the following package sizes:

Dual Syringes - 200 ml (DS-200)

Working Packs - Resin 2.00#
- Hardener 2.00#

SAFETY HANDLING PRECAUTIONS:

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

Araldite 2015/A Resin

WARNING! Causes severe skin irritation. Causes eye irritation.
May cause skin burns and allergic skin reactio.

Avoid contact with eyes, skin, and clothing.
Avoid prolonged or repeated contact with skin.
Wash thoroughly after handling.

Araldite 2015/B Hardener

DANGER! CORROSIVE - causes skin and eye burns.
May cause allergic skin and respiratory 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.

[1]Tested @ 77°F (25°C)

FIRST AID:	In case of contact
Skin:	Immediately wash with soap and water. Remove contaminated clothing and launder before reuse. Destroy contaminated shoes.
Eyes:	Immediately flush with water for at least 15 minutes. Call a physician.
Ingestion:	If conscious, give plenty of water to drink. Do not induce vomiting. Call a physician.
Inhalation:	Remove to fresh air. Administer oxygen or artificial respiration if necessary. Call a physician.
Other:	Referral to physician is recommended if there is any question about the seriousness of any injury.

PRECAUTIONARY NOTE: Thermosetting systems generate heat when curing. The amount of heat and the period of time in which heat is released varies significantly between systems. Additionally, ambient or compound temperature and amount of material mixed can also be factors in the temperature profile of a mixed system.

In some cases, the thermosetting reaction can be vigorous, generating heat sufficient to cause decomposition of the system with subsequent liberation of large volumes of acrid smoke.

A good rule of thumb is never mix more material than can be applied during the stated pot life or gel time. Also take care when using materials in applications other than stated on the Product Data Sheet.

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[1]Tested @ 77°F (25°C)