



TECHNICAL DATASHEET

ADR 240 Epoxy Resin

General Description

Adhesive Technologies ADR 240 is a low to medium viscosity epoxy resin specifically formulated for the use with the ADH range of hardeners to cure at room temperature with minimal post cure requirements.

ADR 240 has excellent mechanical properties and is well suited to hand lamination and coating applications.

Thixotropic Variant

The low viscosity of ADR 240 and hardeners can result in vertical surface drainage heavy laminates. To reduce this problem ATL NZ has produced a thixotropic variant; ADR 240TX. This variant has better sag resistance whilst retaining all the other desirable properties of ADR 240.

Toughened Variant

ADR 240TG is a toughened version of the ADR240 resin, which provides improved fracture resistance whilst retaining all the other desirable properties of ADR 240.

Typical Applications

- Hand Laid Laminates
- Sports Equipment
- Marine Construction
- Composite Structures

Mix Ratio

See table below.

Note: Care should be taken when dispensing and mixing. Optimum results are achieved when recommended ratios are used.

Uncured Properties

ADR240	
Physical State:	Colourless liquid
Specific Gravity (g/ml):	1.16
Viscosity @ 20°C (cPs):	2830

Cured Properties

	ADH25		ADH26		ADH28	
Mix Ratio: 100 parts ADR240 with (by weight)	25		25		25	
Mixed Viscosity (cP) @ 20 °C	2470		2300		2280	
	20 °C	30 °C	20 °C	30 °C	20 °C	30 °C
Pot Life, 100g (hrs : min)	0:15	0:07	0:20	0:11	0:45	0:15
Thin Film (hrs : min)	0:40	0:12	1:00	0:20	1:30	0:55
HDT after 7 days (°C)	60	72	62	76	60	76
Ultimate HDT (°C)	85		93		100	
	ADH160		ADH140		ADH162	
Mix Ratio: 100 parts ADR240 with (by weight)	25		25		25	
Mixed Viscosity (cP) @ 20 °C	2270		2270		2270	
	20 °C	30 °C	20 °C	30 °C	20 °C	30 °C
Pot Life, 100g (hrs : mins)	1:02	0:20	1:30	0:30	2:00	0:35
Thin Film (hrs : mins)	2:20	1:20	2:10	1:30	4:00	2:20
HDT after 7 days (°C)	58	73	60 Brittle	74 Brittle	50	58
Ultimate HDT (°C)	85		102		95	

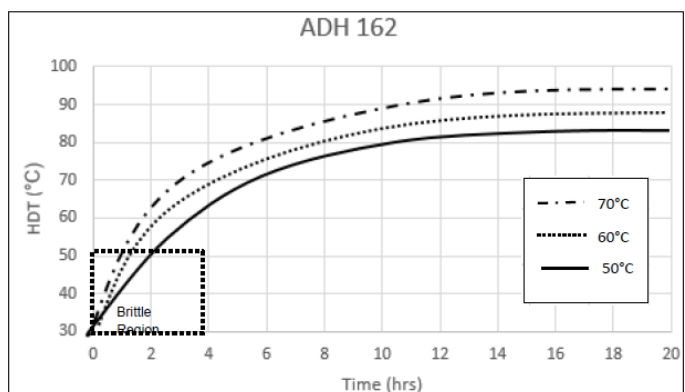
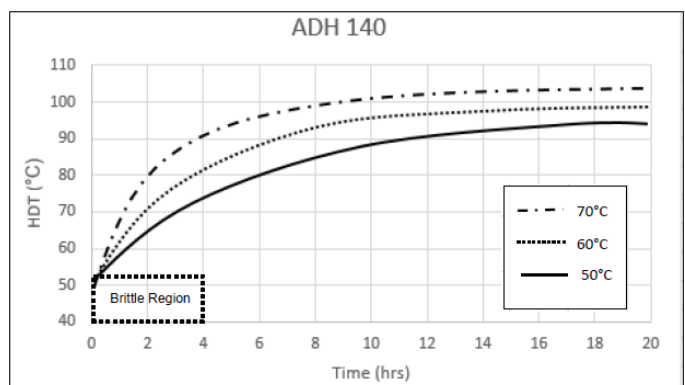
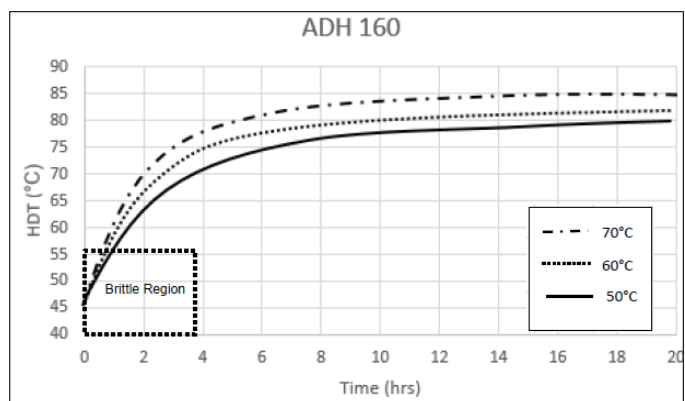
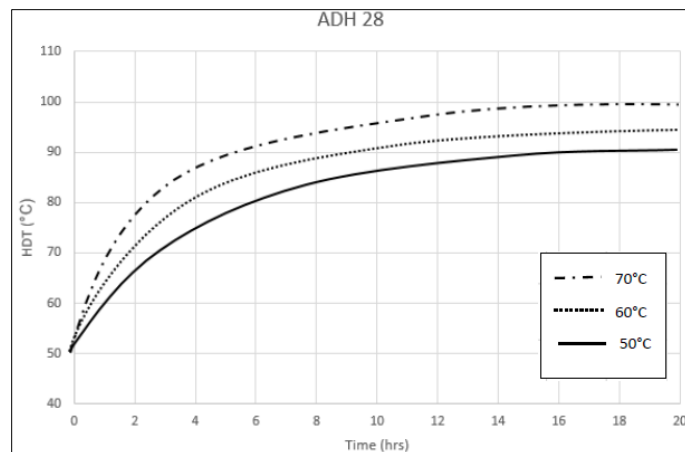
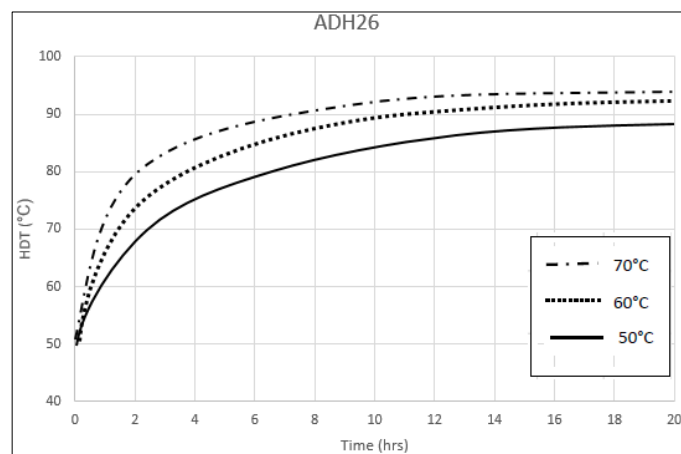
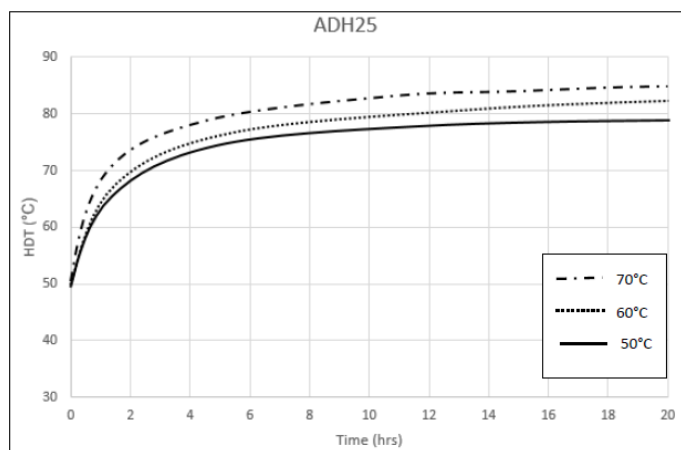
Note: Typical properties and not to be construed as actual specifications.

Typical Post Cure Requirement: 24 hrs @ 20°C followed by 12 hours @ 60°C.

ADR 240 Gel

Adhesive Technologies produces a highly thixotropic variant, ADR 240GEL, which has excellent mechanical properties and is well suited as a gluing compound with minimal sag whilst retaining all the other desirable properties of ADR 240.

Cure Development Profiles



Cured Characteristics

Property	Test Method	Result		
Fracture Elongation	ISO 527	5.0	%	mean
Tensile Strength	ISO 527	73.6	Mpa	mean
Flexural Strength, Ultimate	ISO 178	125.8	Mpa	mean
Flexural Modulus	ISO 178	3308.0	Mpa	mean
Water Absorption	ISO 62	40.0	mg	mean
Glass Transition Temperature, Tg	ISO 11357	78.0	°C	mean
Barcol Hardness	ASTM D2583	34.0		msv
Density	ISO 1675	1.09	g/cm ³	msv
Curing Procedure Used for Type Testing	18-20 hours at room temperature, 12 hours at 50°C			

Post Cure

Post cures at elevated temperatures will be effective in achieving a fast cure, but longer cure times at a gradually increasing temperature are recommended for achieving ultimate HDT.

Storage

ADR 240 will keep for 2 years if kept in original containers at room temperature (15°C – 32°C) and out of direct sunlight. Containers should be tightly sealed to prevent moisture absorption.

Health & Safety

Adhesive Technologies NZ Ltd provides its customers with a product specific Material Safety Data Sheet (MSDS) to cover potential health effects, safe handling, storage, use and disposal information.

Direct skin contact should be avoided. All amines have a moderate sensitising potential and should be considered as mild skin corrosives. ADR 247 system should not be ingested; in an unlikely event ADR 247 is ingested, see your nearest physician immediately.

- Use with good ventilation and adequate safety equipment including gloves.
- If skin contact occurs, wash with lanolin-based hand-cleaner and water.
- If eye contact occurs, immediately wash for 15 minutes with running water.

If swallowed:

Resins - DO NOT induce vomiting, and contact a doctor or the Poisons Information Centre.

Hardeners – DO NOT induce vomiting, give plenty of milk or water and contact a doctor or Poisons Information Centre.

Pack Sizes

ADR240 Resin	ADH Hardener Range
4 kg	1 kg
20 kg	5 kg
200 kg	20 kg
	200 kg

Note: Our products are intended for sale to industrial and commercial customers. We request that customers inspect and test our products before use and satisfy themselves as to contents and suitability. Nothing herein shall constitute a warranty, express or implied, including any warranty or merchantability or fitness, nor is protection from law or patent to be inferred. All patent rights are reserved. The exclusive remedy for all proven claims is replacement of our materials and in no event shall we be liable for special or consequential damage.