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TECHNICAL DATASHEET

ADR 280 Epoxy Resin

General Description

Adhesive Technologies ADR 280 is a low viscosity, solvent free epoxy resin specifically formulated for the use with the ADH range of hardeners to cure at room temperature with minimal post cure requirements.

ADR 280 has a lower mixed viscosity with the addition of thixotropy. ADR 280 offers good working times and will typically give reasonable overnight hardness at room temperature.

The addition of thixotropy is achieved while still retaining low viscosity, which is a significant aid to both Impregnation machine operations and to hand lamination, resisting resin draining from heavy or vertical laminates.

Typical Applications

Hand Laminates, composite structures and products.

Mix Ratio

100 parts resin with 25 parts hardener (by weight).
See table below.
Note: Care should be taken when dispensing and mixing. Optimum results are achieved when recommended ratios are used.

Uncured Properties

Physical State:	Semi opaque liquid
Specific Gravity (g/ml):	1.14
Viscosity @ 20°C (cPs):	1600

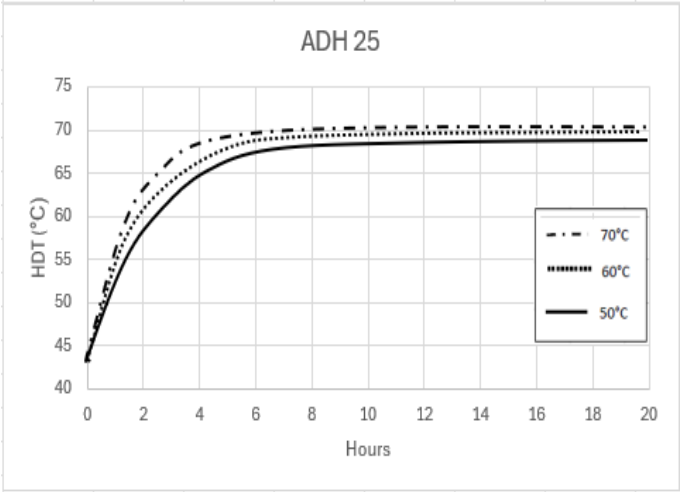
Cured Properties

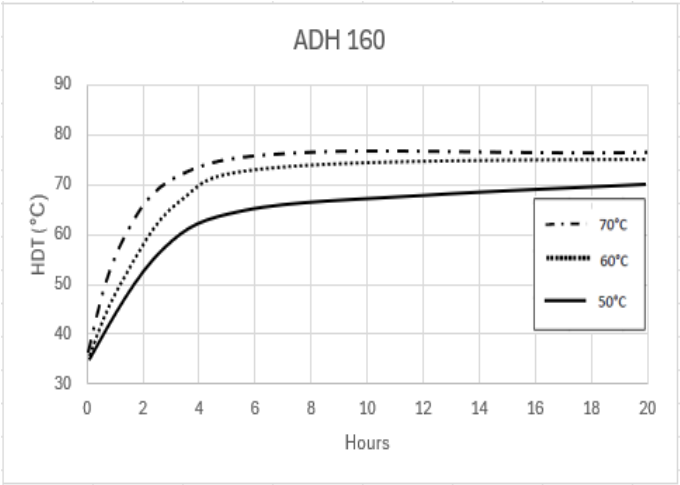
	ADH 25		ADH 26		ADH 28	
Mix Ratios 100 parts ADR280 with (by weight)	25		25		25	
Mixed Viscosity (cps) @ 20C	1100		933		910	
	20°C	***30°C***	***20°C***	***30°C***	***20°C***	***30°C***
Pot Life: 100g (hr:min)	0:18	0:10	0:30	0:15	0:45	0:20
Thin Film (hr:min)	1:15	0:20	1:50	0:42	2:00	1:00
HDT after 7 days (°C)	55	66	55	68	55	69
Ultimate HDT (°C)	75		77		80	
Typical post cure requirement: 24hrs @20°C followed by 8hrs @50°C						

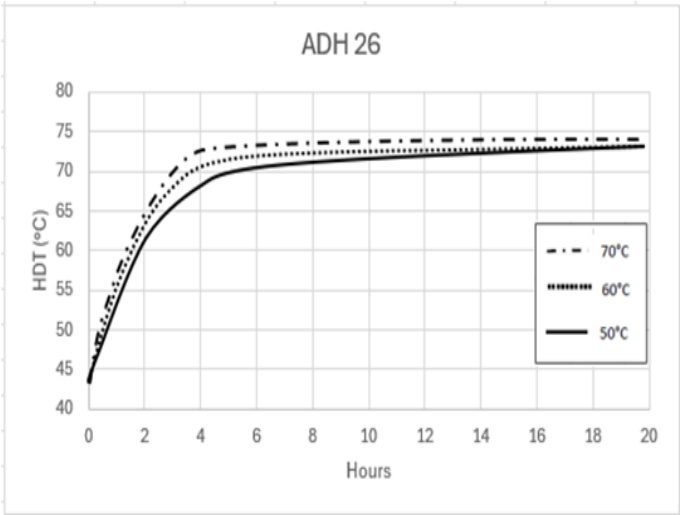
	ADH 160		ADH 140		ADH 162	
Mix Ratios 100 parts ADR280 with (by weight)	25		25		25	
Mixed Viscosity (cps) @ 20C	905		900		900	
	20°C	***30°C***	***20°C***	***30°C***	***20°C***	***30°C***
Pot Life: 100g (hr:min)	1:30	0:35	1:55	0:40	3:20	0:50
Thin Film (hr:min)	3:00	1:50	3:30	1:55	5:00	2:30
HDT after 7 days (°C)	53	67	55	71	50	58
Ultimate HDT (°C)	79		83		80	
Typical post cure requirement: 24hrs @20°C followed by 12hrs @50°C						

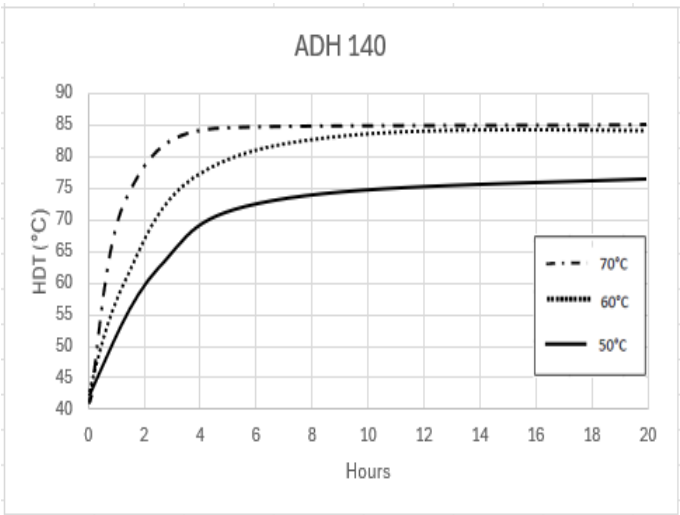
***Note**: Typical properties and not to be construed as actual specifications.*

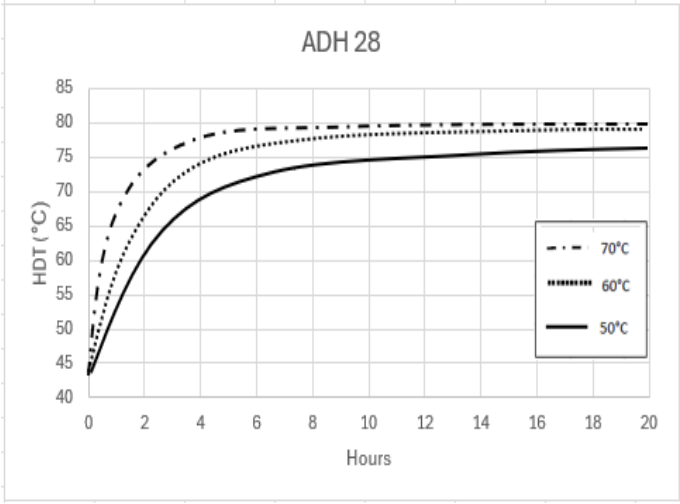
Cure Development Profiles

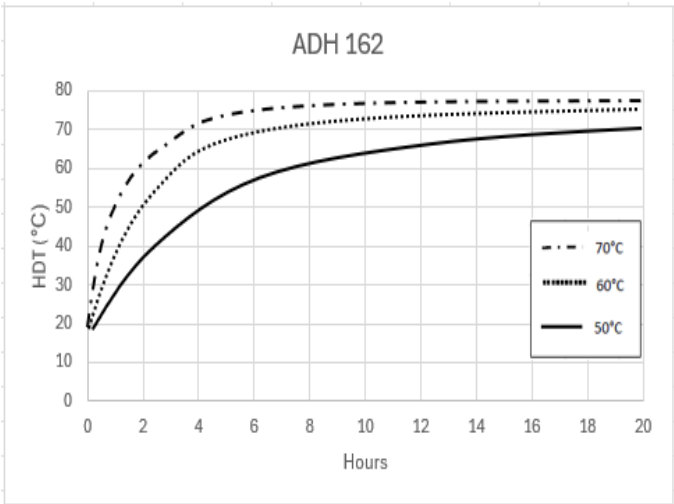












Post Cure

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 280 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 they have a moderate sensitising potential and should be considered mild skin corrosives. ADR280 system should not be ingested; in an unlikely event ADR280 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

ADR 280 Resin	ADH Hardener Range
4 Kg	1 Kg
20 Kg	5 Kg
200 Kg	20 Kg
1000 Kg	200 Kg