

Advanced Materials**Accelerator 960-1**

A LOW VISCOSITY CO-HARDENER OR ACCELERATOR BASED ON AMINOPHENOL

GENERAL	Accelerator 960-1 is a low viscosity tertiary amine co-hardener or accelerator for ambient cure epoxy systems.	
CHEMICAL DESCRIPTION	Aminophenol	
APPLICATIONS	Accelerator for polyamines, polyamidoamines and their adducts used in conjunction with Araldite® epoxy resins for the formulation of ambient cure systems.	
ADVANTAGES	Shortens dust-dry time and full-cure time. To avoid impairment of the mechanical and chemical properties of Araldite® systems, the quantity of Accelerator 960-1 added should not exceed 2%, relative to the epoxy resin. If greater quantities are added, the proportion of hardener must be reduced. Accelerator 960-1 is compliant with FDA regulation 21 CFR 175.300 (4) for contact with foodstuff.	
TYPICAL PROPERTIES*	Visual Appearance	Clear, brown liquid
	Color, Gardner, max	8
	Amine Value, mg KOH/g	561 - 673
	Viscosity @ 25°C (77°F), mPa s (cPs)	150 - 300
	Density @ 25°C (77°F), g/cm ³ (lb/gal)	0.97 (8.1)
	Flash Point, Closed Cup, °C (°F)	254 (490)

* Typical properties are based on Huntsman's test methods. Copies are available upon request.

FORMULATIONS**1. Solvent-Free Clear Coating Starting Formulations**

System (Parts by weight)	1	2	3
Araldite® GY 6010 ⁽¹⁾	100	100	100
Aradur® 825-2	60	60	60
Accelerator 960-1	-	1	2
Gel time ⁽²⁾ 100 g, @ 20°C, (min)	170	145	140
Dust-free time, ⁽³⁾ (hrs)	>30	>30	>30
Cure-through time, ⁽³⁾ (hrs)	>30	~28	~16
Persoz ⁽⁴⁾ hardness (sec)			
1 day	-	-	-
2 days	-	14	35
3 days	10	20	50
7 days	17	50	85

2. Solvent-Based Clear Coating Starting Formulations

System (Parts by weight)	1	2
Araldite® GZ 471 X-75 ⁽⁵⁾	100	100
Aradur® 815-2	38	38
Accelerator 960-1	-	1
Xylene / Butanol (4:1)	62	66
Viscosity ⁽⁶⁾ @ 20°C, (sec)	63	70
Pot life, ⁽⁶⁾ (hrs)	6.5	5
(time lapse when viscosity = 150 sec)		
Dust-free time ⁽³⁾ @ 20°C, (hrs)	3	1.75
Persoz ⁽⁴⁾ hardness @ 20°C / 65%, (sec)		
1 day	190	265
2 days	200	280
3 days	215	295
7 days	365	360
14 days	380	385
After 14 days @ 20°C / 65%		
Dry film thickness: 1.2 mil		
Impact ⁽⁷⁾ (reverse), in-lb	160	160
Cross Hatch Adhesion ⁽⁸⁾	5	5
Mandrel bending ⁽⁹⁾	Pass	Pass

⁽¹⁾ Standard bis A liquid epoxy resin (epoxy equivalent weight: 184 - 188)

⁽²⁾ Tested by TECAM® gelation timer

⁽³⁾ Landolt drying timer

⁽⁴⁾ ISO 1552

⁽⁵⁾ "1 type" bis A solid epoxy in xylene of 75% solid content (EEW: 450 - 530)

⁽⁶⁾ ISO 2431 (DIN cup, 4 mm)

⁽⁷⁾ ISO 6272

⁽⁸⁾ ISO 2409 (0 = worst, 5 = best)

⁽⁹⁾ ISO 1519

PACKAGING & STORAGE	Accelerator 960-1 is supplied in 440 pound steel drums. The product has a shelf life of two years when stored at room temperature in the original sealed container.
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HANDLING/SAFETY PRECAUTIONS	<p>Danger ! Corrosive. Will cause severe eye and skin irritation.</p> <p>Do not get in eyes, on skin or clothing. Do not inhale mist or vapors. Keep container tightly closed when not in use and during transport. Wash after handling.</p> <p>Read Material Safety Data Sheet Before Using. For Industrial Use Only.</p>
FIRST AID	<p>In case of contact :</p> <p>Eyes: Immediately flush with water for at least 15 minutes. Get immediate medical attention.</p> <p>Skin: Promptly wash thoroughly with mild soap and water.</p> <p>Inhalation: Remove to fresh air. Give oxygen if breathing is difficult.</p> <p>Ingestion: If conscious, give plenty of water. Get immediate medical attention.</p>

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