Epoxy Curing Agents and Modifiers

ANCAMINE® 2791 Curing Agent

DESCRIPTION

Ancamine 2791 curing agent is a low-viscosity curing agent designed for high temperature epoxy systems. Ancamine 2791 curing agent is intended to be used as a sole curing agent and is designed for in-situ post-cure (starting at ~80°C).
Ancamine 2791 curing agent is recommended for use with LER for normal conditions and with Novolac/Bis-F for harsher conditions.

ADVANTAGES

- High temperature service
- High chemical resistance
- Crystallization-resistant at lower temperatures
- Excellent Atlas cell test performance

APPLICATIONS

- Primer for storage tanks and transfer pipes
- Protective coatings
- Marine coatings
- Industrial maintenance coatings

SHELF LIFE

24 months from the date of manufacture in the original sealed container at ambient temperature. Store away from excessive heat and humidity in tightly closed containers.

TYPICAL CURE SCHEDULE

2 to 10 days at ambient temperatures.

STORAGE AND HANDLING

Refer to the Safety Data Sheet for Ancamine 2791 curing agent.

TABLE 1: TYPICAL PROPERTIES

Appearance:	Amber Liquid
Color[1] (Gardner):	8
Viscosity[2] @ 25°C (cPs)[1]	70-100
Amine Value (mg KOH/g)[2]	495-540
Equivalent Wt/(H)	54
Recommended Use Level (phr, EEW=190)	28
Specific Gravity[3] @ 25°C (g/mL)	1.00

TABLE 2: TYPICAL HANDLING PROPERTIES (@ 25°C)

Gel Time [3, 5] (150g mix mass) min	84
Thin Film St Time[3, 4] @ 25°C (h)	
Stage I	2:45
Stage II	6:15

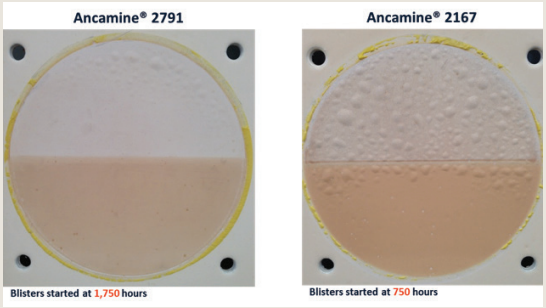
TABLE 3: TYPICAL PERFORMANCE

Glass Transition Temperature (°C)[3]	123

Footnotes:
(1) Brookfield viscometer DV-II+, spindle 21, 25°C
(2) Perchloric acid titration
(3) Formulated with Liquid Epoxy Resin (EEW=190) at the recommended use level of 28 phr, 150g mix
(4) Mickle Laboratory Engineering Co. BK drying recorder, 25°C / 50% RH
(5) Techne GT-6 Gelation Timer

ATLAS CELL PERFORMANCE

Operating experience has shown that many pipes and tanks experience a "cold wall effect" that accelerates moisture permeation through a coating applied to the warmer side of a partition that separates fluids at two different temperatures. The Atlas cell laboratory test was designed to create the cold wall effect in order to test candidate linings, and to provide insight on the corrosion control properties of an organic coating exposed to a chemically aggressive environment. Atlas cell testing is governed by industry standard test methodologies (C868 and NACE TM0174).The following pictures show the performance of Ancamine® 2791 curing agent in the Atlas cell, using Ancamine® 2167 curing agent as a comparative product known to have good high temperature properties. A non-optimized model formulation was used containing epoxy Novolac resin blended with Bis-F resin along with the curing agent. The Atlas cell solution contained 70,000 ppm of chlorite ion, 21 g/L of sodium acetate and was pH adjusted to 5 using hydrochloric acid.



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CHEMICAL RESISTANCE PERFORMANCE

The chemical resistance of Ancamine 2791 curing agent was tested at ambient temperatures with LER. Ancamine 2791 demonstrates very good chemical resistance.

FIGURE 1

Hardness (Shore D) for Ancamine® 2791 coating as a function of chemical exposure

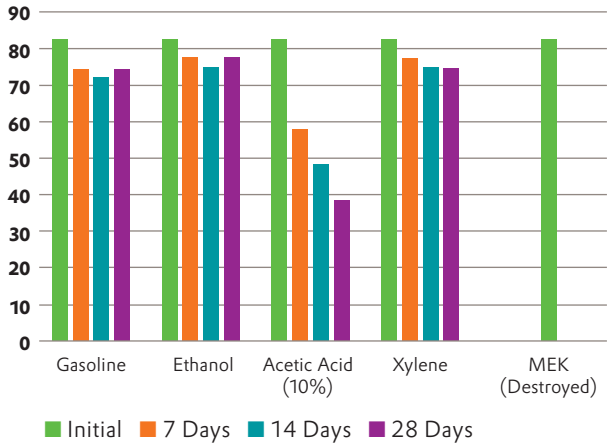
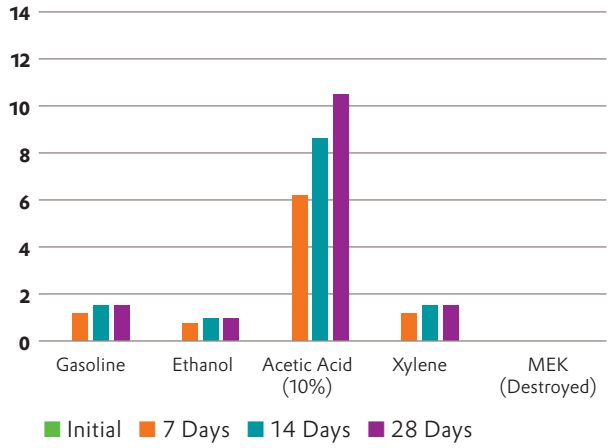


FIGURE 2

Mass increase (weight %) of Ancamine 2791 coating as a function of chemical exposure



EVONIK CORPORATION
7201 Hamilton Blvd.
Allentown, PA 18195
1 800 345-3148
Outside U.S. and Canada 1 610 481-6799

For Technical Information and Support:
Americas: picus@evonik.com
EMEA: apcse@evonik.com