

## DESCRIPTION

Amicure IC-221 is an amine curing agent specifically designed for polyisocyanate resins. Preferred resins of choice are standard and low viscosity HDI trimer isocyanates for a range of industrial applications. Clear and pigmented topcoats based on Amicure IC-221 support high aesthetics, UV stability and rapid property development for fast return to service. Amicure IC-221 curing agent is free of solvents, alkyl phenol derivatives and benzyl alcohol.

Coatings and floorings based on Amicure IC-221 curing agent are recommended to be used in combination with an epoxy primer, especially under damp conditions. Working and drying times are accelerated under high humidity conditions.

## ADVANTAGES

- Fast cure speed
- Excellent aesthetics and UV durability
- Low mix viscosity for improved handling
- Low odor

## APPLICATIONS

- Topcoats and Sealers

## SHELF LIFE

At least 12 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.

## STORAGE AND HANDLING

Refer to the Safety Data Sheet for Amicure IC-221 curing agent.

**TABLE 1: TYPICAL PROPERTIES**

<b>Appearance</b>	Light yellow liquid
<b>Colour<sup>1</sup> (APHA)</b>	≤215
<b>Viscosity<sup>2</sup> @ 25°C (mPa.s)</b>	100-800
<b>Water Content<sup>3</sup> (wt %)</b>	≤0.015
<b>Specific Gravity @ 21°C</b>	1.06
<b>Equivalent Wt/{H}</b>	376
<b>Recommended Use Level<sup>4</sup> (PHR)</b>	185

**TABLE 2: TYPICAL HANDLING PROPERTIES<sup>4</sup>  
25°C, 50% RH**

<b>Mix Viscosity<sup>2</sup> (mPa.s)</b>	1,000-1,500
<b>Working Pot Life<sup>5</sup> (min)</b>	20-25
<b>Thin Film Set Time<sup>6</sup> (h)</b>	45
<b>Persoz Hardness after 1 / 7 days (s)</b>	200/210
<b>Shore D Hardness after 8 / 16 / 24 h</b>	50 / 73 / 75
<b>Typical cure schedule</b>	2-7 days

**TABLE 3: TYPICAL HANDLING PROPERTIES<sup>4</sup>  
5°C, 50% RH\***

<b>Thin Film Set Time<sup>6</sup> (min)</b>	75
<b>Persoz Hardness after 1 / 7 days (s)</b>	145/205
<b>Shore D Hardness after 8 / 16 / 24 h</b>	30 / 70 / 72

**TABLE 4: TYPICAL PERFORMANCE\***

<b>UV-A Resistance after 500 h (ΔE)</b>	<5
<b>Impact Resistance (kg.cm)</b>	>200
<b>Abrasion Resistance, CS17, 1000 cycli (mg loss)</b>	40
<b>Compressive Strength (MPa)</b>	32
<b>Tensile Strength (MPa)</b>	32
<b>Tensile Elongation at Break (%)</b>	10
<b>Glass Transition Temperature<sup>7</sup> (°C)</b>	48
<b>Carbamation Resistance<sup>8</sup> (Scale 1-5, 5=best)</b>	5

1. ASTM D 1544
2. Brookfield RVTD, spindle 4
3. Karl Fisher Method
4. With HDI Trimer, 21.8 wt% NCO, 2,500 mPa.s at 25°C
5. Time to viscosity build of 12 Pa.s at 25°C
6. ASTM D 5895 - BK Drying Recorder, Phase 3
7. Differential Scanning Calorimetry (DSC)
8. ISO 2812 (wet patch method)

Epoxy Curing Agents and Modifiers

# AMICURE® IC-221 Curing Agent for Polyisocyanate Resin

**EVONIK RESOURCE EFFICIENCY GMBH**

Business Line Crosslinkers  
Paul-Baumann-Straße 1  
45764 Marl  
Germany

[apcsepx@evonik.com](mailto:apcsepx@evonik.com)  
[www.evonik.com/crosslinkers](http://www.evonik.com/crosslinkers)

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