

## Product information

# AMICURE<sup>®</sup> IC-221

## Curing Agent for Polyisocyanate Resin

### 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.

### TYPICAL PROPERTIES

Property	Value	Unit	Method
Appearance	Light yellow liquid		
Colour	≤ 215	APHA	ASTM D 1544
Viscosity @ 25°C	100-800	mPa s	Brookfield RVTD, spindle 4
Water Content	≤ 0.015	wt %	Karl Fisher Method
Specific Gravity @ 21 °C	1.06		
Equivalent	376	Wt/{H}	
Recommended Use Level *	185	PHR	

### 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.

### TYPICAL HANDLING PROPERTIES \* (25°C, 50% RH)

Property	Value	Unit	Method
Mix Viscosity	1000-1500	mPa.s	Brookfield RVTD, spindle 4
Working Pot Life	20-25	min	Time to viscosity build of 12 Pa.s at 25°C
Thin Film Set Time	45	h	ASTM D 5895 - BK Drying Recorder, Phase 3
PersoZ Hardness after 1 / 7 days	200/210	s	
Shore D Hardness 8 / 16 / 24 h	50 / 73 / 75		
Typical cure schedule	2-7	days	

### TYPICAL HANDLING PROPERTIES \* (5°C, 50% RH)

Property	Value	Unit	Method
Thin Film Set Time	75	min	ASTM D 5895 - BK Drying Recorder, Phase 3
PersoZ Hardness after 1 / 7 days	145/205	s	
Shore D Hardness after 8 / 16 / 24 h	30 / 70 / 72		

### TYPICAL PERFORMANCE PROPERTIES \*

Property	Value	Unit	Method
UV-A Resistance after 500 h	< 5	ΔE	
Impact Resistance	> 200	kg.cm	
Abrasion Resistance CS17, 1000 cycli	40	mg loss	
Compressive Strength	32	MPa	
Tensile Strength	32	MPa	
Tensile Elongation at Break	10	%	
Glass Transition Temperature	48	°C	Differential Scanning Calorimetry (DSC)
Carbamation Resistance	5	Scale 1-5, 5=best	ISO 2812 (wet patch method)

\* with HDI Trimer, 21.8 wt% NCO, 2500 mPa.s at 25°C

Amicure® is a registered trademark of Evonik Industries AG or one of its subsidiaries.

**Disclaimer**

This information and all further technical advice are based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.

**EVONIK OPERATIONS GMBH**

Business Line Crosslinkers  
Paul-Baumann-Str. 1  
45764 Marl  
Germany

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

**Product Information:** [APCSE@evonik.com](mailto:APCSE@evonik.com)

**Sample Request:** [APCSE@evonik.com](mailto:APCSE@evonik.com)

**EVONIK CORPORATION**

Business Line Crosslinkers  
7001 Hamilton Boulevard  
Trexlerstown, PA 18087  
USA

[CrosslinkersProinfo@evonik.com](mailto:CrosslinkersProinfo@evonik.com)

[Crosslinkers-Samples@evonik.com](mailto:Crosslinkers-Samples@evonik.com)

**EVONIK SPECIALTY CHEMICALS  
(SHANGHAI) CO., LTD.**

Business Line Crosslinkers  
55, Chundong Road  
Xinzhuang Industry Park  
Shanghai, 201108  
China

[CL-Asiainfo@evonik.com](mailto:CL-Asiainfo@evonik.com)

[CL-Asiainfo@evonik.com](mailto:CL-Asiainfo@evonik.com)

