
Type Blocked aliphatic polyisocyanate based on hexamethylene diisocyanate

Features

- # Low curing temperature (90 for base coat application)
 - # Good storage stability
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Applications

- # One-component applications
 - # Plastic coatings (curing-temp. 90 for base coat)
 - # Base coat for automotive bumper
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Typical properties

Appearance	Colorless to slightly yellowish clear liquid
Non-volatile	60 wt%
Solvent	Xylene / n-Butanol=15 / 25 (wt%)
Blocked NCO content	6.5 wt%
Viscosity	200 mPa · s at 25
Color value	< 1 (Gardner)
NCO equivalent weight	Approx. 646
Flash point	21.1

Compatibility

<u>With polyols</u>		<u>Resin solution</u>	<u>Dried film</u>
Acrylic	Setalux 1184(*)	+	+
	Setalux1767(*)	+	+
Polyester	Setal 90173(*)	+	+
	Setal 6306(*)	+	+

+ ; Soluble, ~ ; Insoluble + ; Transparent, ~ ; Hazy
(*)Nuplex Resins (ex-Akzo Nobel Resins' product)

Mixing ratio of DURANATE™ MF-K60X with polyols is based on NCO/OH equivalent ratio of 1/1.

These values provide general information and are not part of the product specifications.

S.S. of film cured by MF-K60X

Formulation :

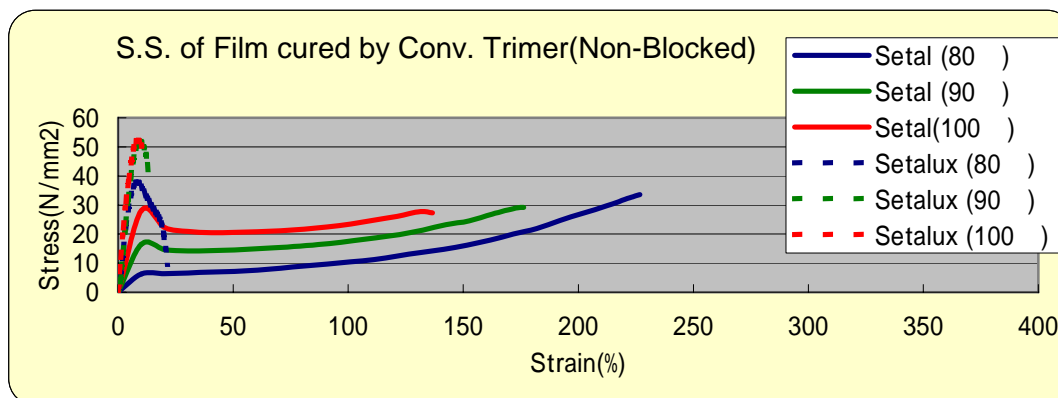
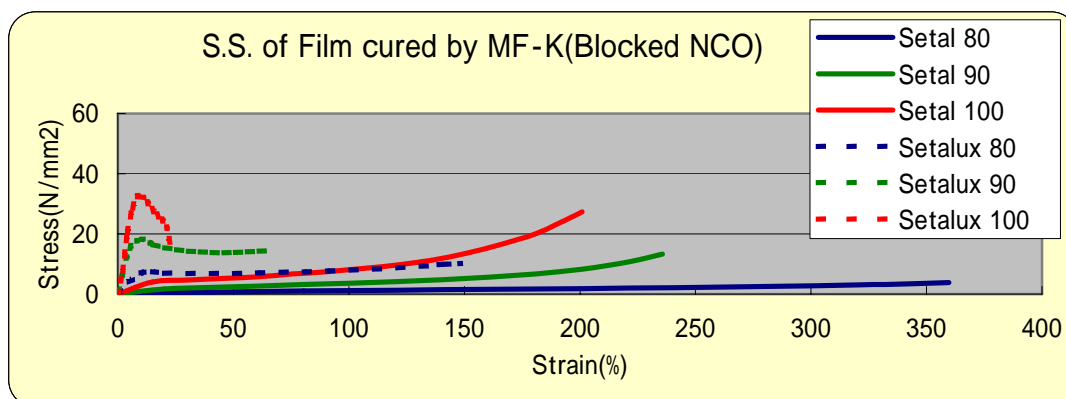
- Polyol : manufactured and sold by Akzo
 - Polyester Polyol; Setal 90173 (OH%=2.27wt%,NV=50wt%)
 - Acrylic Polyol; Setalux 1184(OH%=2.0wt%,NV=52wt%)
- Blocked Polyisocyanate : DURANATE™ MF-K60X
- NCO / OH = 1.0

Bake: 30min.

Gel fraction vs. Curing temperature

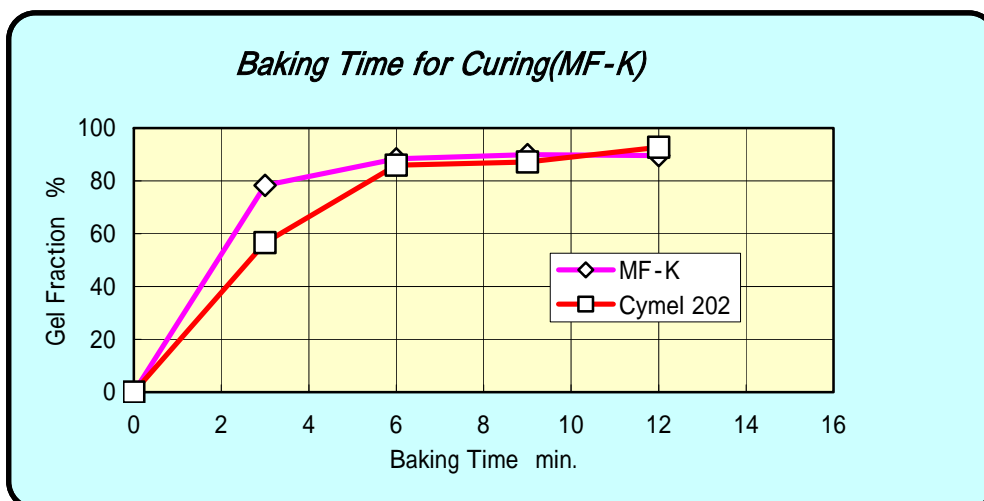
Polyol	Gel fraction (wt%)			Hardness of film (Koenig)		
	80	90	100	80	90	100
Setal 90173	63 (95)	86 (97)	92 (97)	3 (26)	13 (50)	24 (79)
Setalux 1184	72 (89)	86 (93)	91 (95)	33 (74)	46 (94)	88 (102)

*() ; cured by conventional HDI trimer (Non-Blocked)



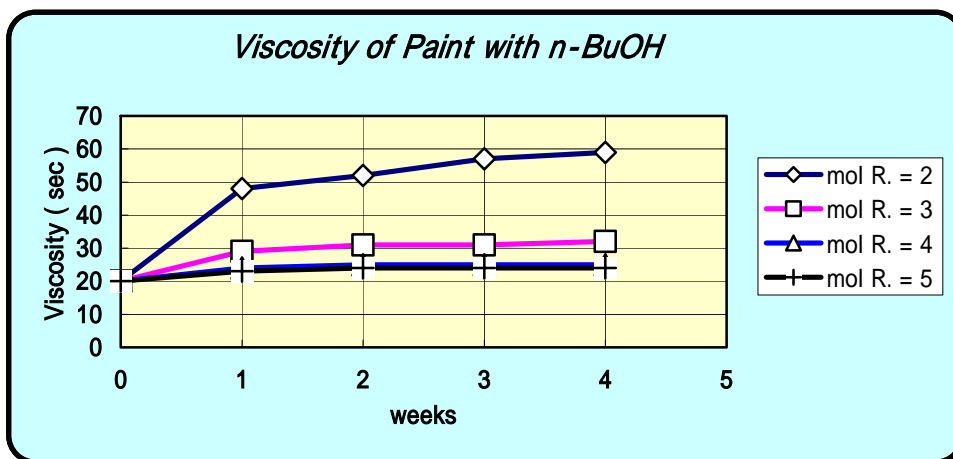
High curing speed

Curing speed of MF-K60X is faster than that of melamine.



Polyol : polyester (Setal 6306 S S-60 of Nuplex OH = 2.7%, AV = 42mgKOH/g)
Baking Temp.: 140

Storage stability of paint using MF-K60X



1. **Formulation** :
 - Polyol : Acrylic Polyol A801
(manufactured and sold by DIC OHV = 100 mgKOH/g Resin)
 - Blocked Polyisocyanate : DURANATE™ MF-K60X
 - NCO / OH = 1.0
2. **Storage condition** : 40 under Nitrogen
3. **Measurement of Viscosity** : Ford Cup #4 at 20

Storage, handling and use

DURANATE™ MF-K60X is sensitive to moisture and should therefore always be stored in sealed containers. After an original container is once opened, the atmosphere in it should be replaced with dry N₂ or dry air. Because this product reacts with water to form CO₂ gas. Avoid storage below approx. -5 °C even in winter, or a milky turbidity might appear or solidification might occur in the product. However, even in such a case, it will get back clear by heating to 40 ~ 50 °C. Heat by water bath etc., and keep away from all sources of ignition. This product might become slightly yellowish red after more than about 6 months. But this color change had no effect on its properties.

For further information:

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