

**Type** Blocked aliphatic polyisocyanate based on hexamethylene diisocyanate

### Features

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

### Applications

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

### 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	250 mPa · s at 25°C
Color value	< 1 (Gardner)
NCO equivalent weight	Approx. 646
Flash point	21.1°C

### 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 with MF-K60X

### Formulation :

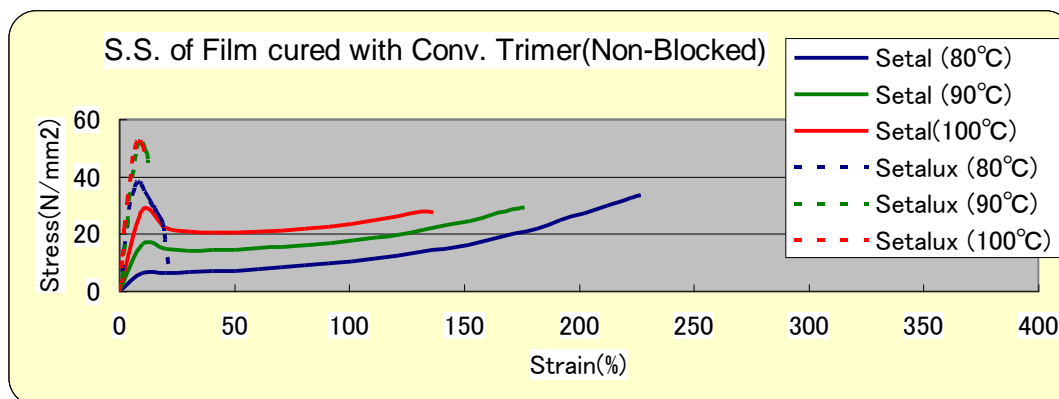
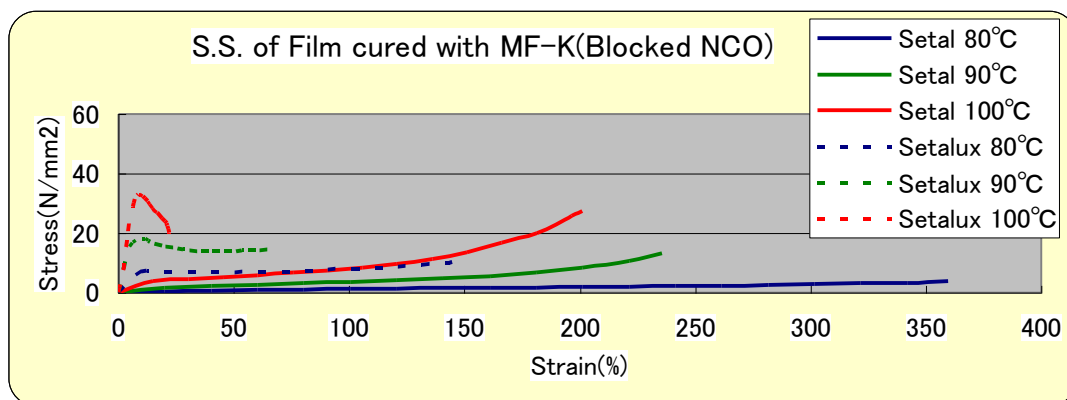
- Polyol : manufactured and sold by Akzo
  - Polyester Polyol; Setal 90173 (OH%=2.27wt%,NV=50wt%)
  - Acrylic Polyol; Setalux 1184(OH%=2.0wt%,NV=52wt%)
- Blocked Polyisocyanate : DURANATE™ MF-K60X
- NCO / OH = 1.0

Bake: 30min.

### Gel fraction vs. Curing temperature

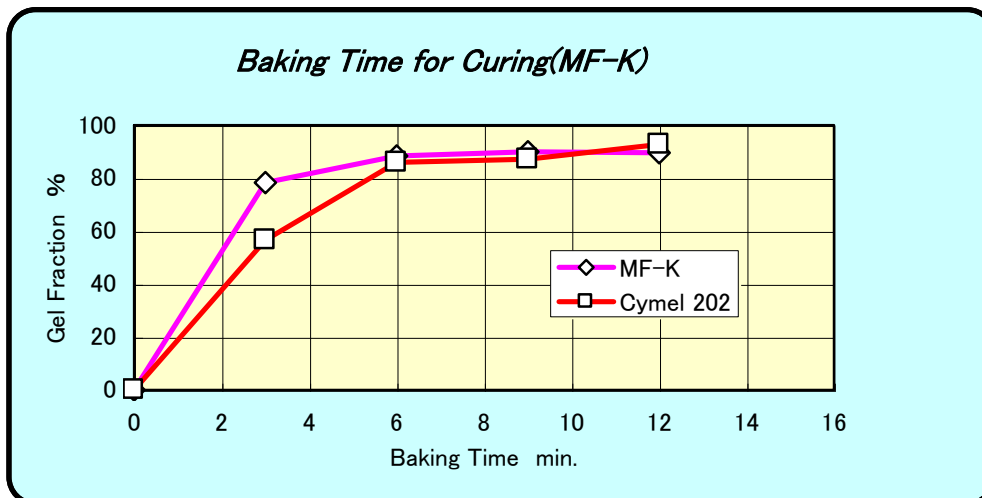
Polyol	Gel fraction (wt%)			Hardness of film (Koenig)		
	80°C	90°C	100°C	80°C	90°C	100°C
Setal 90173	63 (95)	86 (97)	92 (97)	3 (26)	13 (50)	24 (79)
Setalux 1184	72 (89)	86 (93)	91 (95)	33 (74)	46 (94)	88 (102)

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



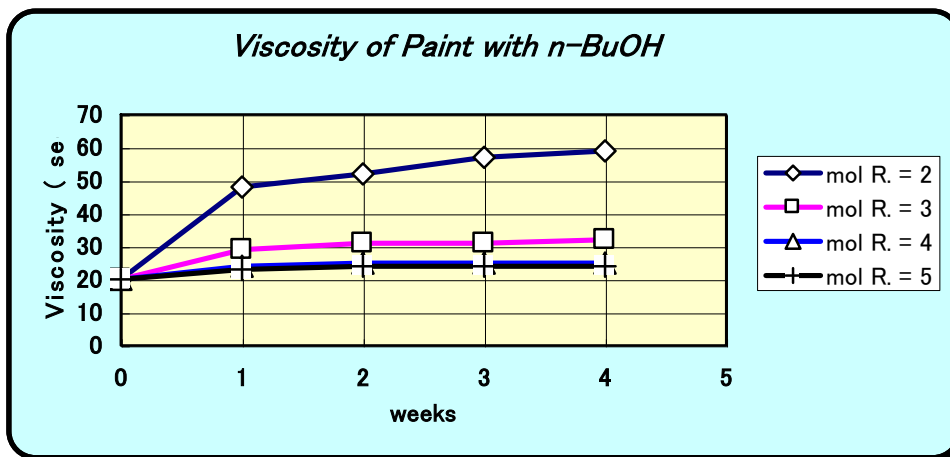
**High curing speed**

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



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

**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°C under Nitrogen

**3. Measurement of Viscosity :** Ford Cup #4 at 20°C

**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 N<sub>2</sub> or dry air. Because this product reacts with water to form CO<sub>2</sub> 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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