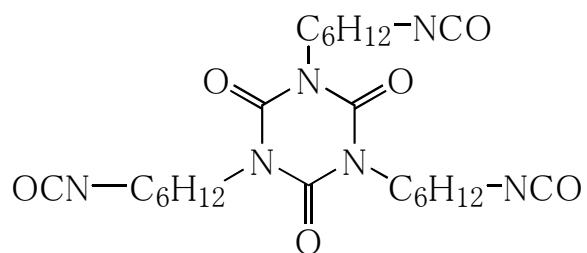


Type Aliphatic Polyisocyanate (HDI Trimer)



Features

- # High NCO content
- # Lower viscosity
- # Good coating film appearance
- # Good weather resistance
- # Low residual monomer

Applications

- # Two-component applications
- # Plastic coatings
- # Automotive refinishes
- # Automobile, motorcycle; base coat and top coat
- # Heavy duty coatings

Typical properties

Appearance	Colorless to slightly yellowish clear liquid
Non-volatile	90 wt%
Solvent	Solvent naphtha (petroleum), light arom. / Butyl acetate = 1 / 1
NCO content	20.8 wt%
Viscosity	375 mPa · s at 25°C
Color value	< 1 (Gardner)
NCO equivalent weight	Approx. 202
Flash point	60 °C
Relative density	1.13(20 °C) (H ₂ O = 1)

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

Stability / thinnability

DURANATE™ TPA-90SB can be thinned with esters, ketones and aromatic hydrocarbons such as ethyl acetate, butyl acetate, methoxypropylacetate(PMA), methyl ethyl ketone, methyl iso-butyl ketone, cyclohexanone, toluene, xylene, Solvesso #100 and mixture thereof. Generally speaking, it has good compatibility with the solvent mentioned. However, the solutions formed must be tested for their storage stability.

Only PU grade solvents can be used (max. 0.05% water, absence of reactive groups such as hydroxyl or amines groups). Aliphatic hydrocarbons such as hexane, cyclohexane, methylcyclohexanes and mineral spirits are unsuitable as solvents because of their poor solubility.

Aromatics	Toluene	+
	Xylene	+
	Solvesso#100	+
Esters	Ethyl acetate	+
	n-Butyl acetate	+
Ketones	Methyl ethyl ketone	+
	Methyl iso-butyl ketone	+
Ether-esters	Methoxypropylacetate (PMA)	+
Aliphatics	Cyclohexane	~
	Methylcyclohexane	~
	Mineral spirit	~

+ ; Soluble, ~ ; Insoluble

DURANATE™ TPA-90SB should not be thinned to below a solid content of 40%.

Prolonged storage of solution with lower solid content may result in turbidity and sedimentation.

Compatibility

With polyisocyanates

Resin solution

DURANATE™	24A-100	+
	22A-75PX	+
	21S-75E	+
	TKA-100	+
	MFA-75X	+
	TSA-100	+
	TSS-100	+
	TSE-100	~
	E-402-90T	+
	E-405-80T	+
	D-101	+
	D-201	+
	VESTANAT	T1890L
T1890E		+
Desmodur	Z4470	+

+ ; Soluble, ~ ; Insoluble

Desmodur; Covestro AG, VESTANAT; Degussa

With polyols and other resins

Resin solution

Dried film

Acrylic	A801	+	+
	A801-P	+	+
	A851	+	+
	50-257	+	+
Halwemer	F-45	+	+
	Hypomer	FX-2050	+
		FX-3070	+
Setalux	1198	+	+
	1753	+	+
Lumiflon	LF-100	+	+
	LF-200	+	+
	LF-400	+	+

+ ; Soluble, ~ ; Insoluble + ; Transparent, ~ ; Hazy

Acrylic; DIC Co.,Ltd., Halwemer; DSM NeoResins, Hypomer; Deuchem Co.,Ltd., Setalux; Nuplex Resins(ex-Akzo Nobel Resins' product) ,Lumiflon; Asahi Glass Co.,Ltd.

Mixing ratio of DURANATE™ TPA-90SB with polyols is based on NCO/OH equivalent ratio of 1/1.

Storage

DURANATE™ TPA-90SB is sensitive to moisture and should therefore always be stored in sealed containers.

Characteristics of viscosity

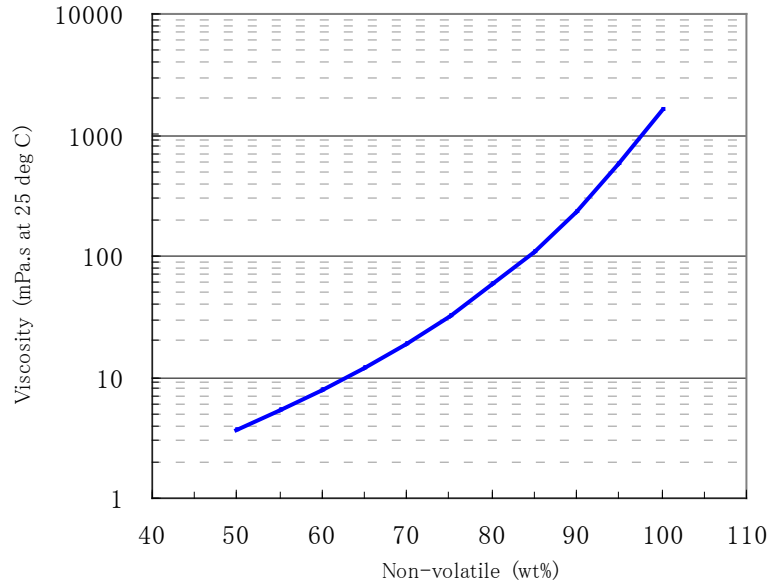


Fig-1. Dilution behavior of DURANATE™ TPA-90SB

Weatherability

Weatherability by Super-Xenon Weathermeter

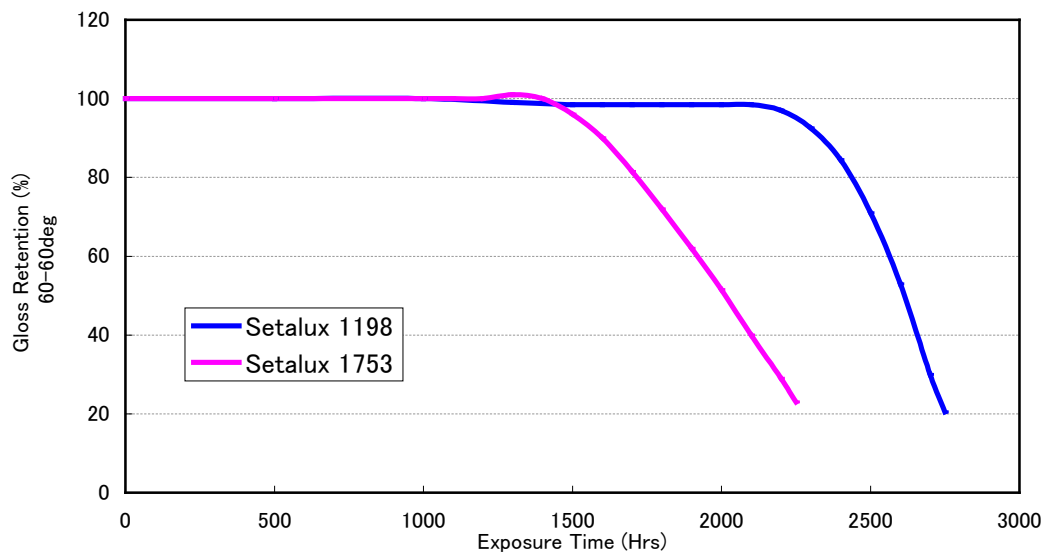


Fig-2. Weatherability of DURANATE™ TPA-90SB with acrylic polyol Polyol; Setalux 1198 & 1753 (Nuplex Resins) Weathered by Super-Xenon Weathermeter

For further information:

ASAHI KASEI CORPORATION

Performance Coating Materials Division

1-105 Kanda Jinbocho, Chiyoda-ku, Tokyo101-8101 JAPAN

Tel: +81-3-3296-3331

Fax: +81-3-3296-3462

URL: <http://www.akcpc.jp/en/duranate/index.html>