



## Provisional Data Sheet

**Voraforce\* TJ 1804** Isocyanate  
**Voraforce\* TJ 1854** Polyol

### Description

Two components polyurethane system suitable for molding self-releasing structural parts with densities in the range of 950 – 1050 g/l having high impact and temperature resistance. System must be processed with high pressure machines with closed mold RIM technology. Addition of suitable flame retardant additives allows fire resistance according to UL 94 V0 and V5 standard. Stored polyol has to be intimately homogenized before use. Suggested working ratio isocyanate / polyol 125-130 / 100. Suggested working ratio with addition of 10% of Ammonium Polyphosphate is 115-120/100 (iso/pol).

### Typical Components Properties \*

	VORAFORCE* TJ 1804		VORAFORCE* TJ 1854	Method
	Unit	Isocyanate	Polyol	
Viscosity, 25/25 °C	mPa.s	250-350	1150-1250	ASTM D 445
Specific gravity, 25/25 °C		1,21	1,03	ASTM D 891

### Recommended Process Conditions

	Unit	Value
VORAFORCE* TJ 1854 Polyol	p. by weight	100
VORAFORCE* TJ 1804 Isocyanate	p. by weight	125-130
Components temperature	°C	25-35
Mold temperature	°C	55-65
Polyol air emulsion	% vol	> 10 < 25
Thickness	mm	>4 < 20

### Typical Reaction Characteristics \*\*

	Unit	HPMachine
Cream time	s	3-4
Gel time	s	8-10
Free Rise density	g/L	400-600

(\*\*) Values refer to laboratory tests made with a high pressure machine and components at 25°C. Values may vary according to working conditions.

## Suggested Storage Conditions

	VORAFORCE* TJ 1804		VORAFORCE* TJ 1854.
	Units	Isocyanate	Polyol
Storage temperature	°C	10-45	10-45
Shelf life <sup>(1)</sup>	months	6	6

(1) Data refer to components stored in sealed drums, in a covered and dry place at the reported temperature range, avoiding direct sunlight exposure.

## Typical Polymer Properties \*

	Unit	Values	Method
ISO/POL ratio		125/100	
Total applied density	g/l	1000-1050	DIN 53479
Hardness	Shore D	75-77	DIN 53505
Flexural modulus	MPa	1000-1200	DIN EN ISO 178
Flexural strength	MPa	83-88	DIN EN ISO 178
Impact CHARPY R.T.	KJ/m <sup>2</sup>	32-35	DIN EN ISO 179
Heat deflection temperature method B	°C	110-115	DIN EN ISO 75
Linear shrinkage **	%	0,7- 1%	

\* Values are provided as general information only. They are approximate values and are not part of the product specifications.

\*\*Processing conditions: molded density 1050 g/l, molded temperature 60°C, demolding time 120 sec., range of thickness from 4 to 10 mm.

## Safety Considerations

Safety Data Sheet (SDS) is available from the Dow Chemical Company. SDS is provided to help customers satisfy their own handling, safety and disposal needs, and those that may be required by locally applicable health and safety regulations. SDS sheets are updated regularly. Therefore, please request and review the most current SDS before handling or using any product. Copies of the SDS are available on request through your nearest Dow Sales office.

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