



## Technical Datasheet



# BETAMATE™ 250G

## Semi-Crash resistant Structural Adhesive

### Short Description

BETAMATE™ 250G is a one component, epoxy-based adhesive, filled with glass beads, especially developed for the body shop. The adhesive is used in the car to increase the operation durability, crash performance and the body stiffness.

### Characteristic

BETAMATE™ 250G has excellent adhesion to automotive steels (including coated steels and pretreated aluminum with good tolerance to oily and dry lubes). BETAMATE™ 250G helps to increase the stiffness and the crash stability of the entire car body with high durability of the adhesive and adhesive bond and corrosion protection due to its sealing capability. It is compatible with other mechanical and thermal joining techniques, compatible with the e-coat process, wash-off resistant and pre-curable up to four weeks open time in the uncured bond. Typical applications include bonding of the vehicle body structure and closure hem flange applications.

Unless specified otherwise test are conducted at 23°C/50% relative humidity. Standard curing 30min / 180°C

General Properties	Value	Unit	Standard
Basis	Epoxy resin	-	-
Colour	orange	-	-
Other Properties	Value	Unit	Standard
Density	1.26	kg/l	ISO 1183
Solid Content	> 99	%	-
Rheological Properties	Value	Unit	Standard
G' at $\gamma=0.05\%$ (45°C)	17000	Pa	DIN 54458
$\eta^*$ at $\gamma=10\%$ (45°C)	125	Pas	DIN 54458
Mechanical Properties	Value	Unit	Standard
Tensile Strength	34	MPa	DIN EN ISO 527-1
Elongation at break	Approx. 5	%	DIN EN ISO 527-1
E-Modulus	1900	MPa	DIN EN ISO 527-1
Lap shear strength <sup>1)</sup>	19	MPa	DIN EN 1465
T-Peel strength <sup>2)</sup>	8	N/mm	DIN EN ISO 11339
Impact Peel strength <sup>3)</sup>	26	N/mm	ISO 11343

Footnotes: 1) DX56 Z100MB, 0.8 mm; Adhesive layer thickness 0.2mm; Bonded area 25x10mm  
2) DX56 Z100MB, 0.8 mm; Adhesive layer thickness 0.2mm; Bonded area 25x100mm 3)  
DX56 Z100MB, 0.8 mm; 2m/s; Adhesive layer thickness 0.2mm; Bonded area 20x30mm

Subject to change; last revision : 2020-09-07

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### Surface Preparation

The material has been designed to tolerate up to 5 g/m2 of surface oil.

### Application

All Dupont T&I Adhesives products are primarily developed in co-operation with the automobile manufacturers, according to their needs and their specifications, they are approved for the specific applications as defined by the customer. The use of the product other than approved application must be released in written form by the Technical Service of DuPont T&I Adhesives.

### Application Equipment

Cartridges: hand-operated or pneumatic heated gun with mechanical piston  
Drums, pails: heated pumping system

### Application Parameter

The product is cold pumpable and can be applied as bead / swirl / jet-spray. It can be processed with the following parameters:

Application speed: up to 500 mm/s

Temperature follower plate: unheated / 35 - 40°C possible

Temperature follower plate to dozer: unheated / per heating zone 5°C heat increase, max temperature at dozer 55°C

Temperature nozzle: 45 - 60°C

For an optimum tack of the adhesive, the parts to bond should be stored at 15°C or higher.

In case of an application break longer than 30 minutes the heating of the application equipment should be switched off.

### Curing Condition

Standard curing 30min @ 180°C

Minimal curing condition are >140°C for at least 30min

### Cleaning

Uncured material can be removed with BETACLEAN 3510. Attention: The contact with bonded areas should be avoided.

### Delivery Form

Drum, Pail, Cartridge

Storability	Value	Unit	Standard
Shelf life at different storage conditions	12 / 9 / 3	month	-
Storage conditions	<5 / 5-28 / 28-40	°C	-

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