

BETAMATE™ 1460N

Structural Adhesives

BETAMATE™ 1460N is a one component, thermally hardening epoxy based adhesive which was specially developed for the body shop. The adhesive is used in the car to increase the operation durability, the crash performance and the body stiffness of the vehicle.

BETAMATE™ 1460N is characterized by a very good storage- and process stability. The adhesion to the types of steel used in the automobile construction, including coated steels and pretreated aluminum, is excellent. It shows a very good compatibility with a wide variety of oils and lubricants. The rigidity and crash stability of the vehicle are significantly increased. The adhesive is suitable for protecting the metal and the weld points from corrosion and can serve as a seal. It is compatible with other thermal mechanical joining processes, e-coat processable and has an outstanding wash-off resistance. BETAMATE™ 1460N is UV detectable; the maximum storage time in the joined and uncured bond under conditions between 18°C – 23°C and 30% - 50% r.h. is 8 weeks.

Product information

Colour	Purple ^[1]
Basis	Epoxy resin
Solid content	≥99 %
[1]: Lilac	

Rheological properties

Viscosity, Casson	57 ^[2] Pa.s
Yield Point, Casson	690 ^[2] Pa
[2]: Bohlin 45°C	

Typical mechanical properties

Tensile Modulus	2500 MPa	ISO 527-1/-2
Stress at break	34 MPa	ISO 527-1/-2
Strain at break	4 %	ISO 527-1/-2
Lap shear strength	≥30 MPa	DIN EN 1465
Peel strength, T-Peel	11 ^[4] N/mm	ISO 11339
Peel strength, Impact-Peel	33 ^[5] N/mm	ISO 11343

[3]: DC01; 1.5mm; Adhesive layer thickness 0.2mm; bonded area 25x10mm; after 30min / 180°C curing

[4]: HC180 ZE 75/75; 0.8mm; Adhesive layer thickness 0.2mm; bonded area 25x100mm; after 30min / 180°C curing

[5]: HC180 ZE 75/75; 0.8mm; 2m/s; Adhesive layer thickness 0.2mm; bonded area 20x30mm; after 30min / 180°C curing

Other properties

Density	1.3 g/cm ³	ISO 1183
---------	-----------------------	----------

BETAMATE™ 1460N

Structural Adhesives

Storage and stability

Shelf life

360^[6] days

[6]: at less than 30°C

Characteristics

Compatibility

Metals

Additional information

Adhesives

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 can be applied as bead. The ideal material temperature for conveying is >18°C.

It can be processed with the following parameters:

Application speed: up to 300 mm/s

Temperature follower plate: 30-40°C

Temperature follower plate to doser: Per heating zone 5°C heat increase, max temperature at doser 55°C

Temperature nozzle: 55 - 65°C

For an optimum tack of the adhesive, the parts to bond should be stored at 16°C or higher. In case of an application break longer than 30 minutes the heating of the application equipment should be switched off.

Cleaning

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



BETAMATE™ 1460N

Structural Adhesives

Revised: 2023-03-23

Page: 3 of 3

DuPont

The information set forth herein is furnished free of charge, is based on technical data that DuPont believes to be reliable, and represents typical values that fall within the normal range of properties. This information relates only to the specific material designated and may not be valid for such material used in combination with other materials or in other processes. It is intended for use by persons having technical skill, at their own discretion and risk. This information should not be used to establish specification limits nor used alone as the basis of design. Handling precaution information is given with the understanding that those using it will satisfy themselves that their particular conditions of use present no health or safety hazards and comply with applicable law. Since conditions of product use and disposal are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information. As with any product, evaluation under end-use conditions prior to specification is essential. Nothing herein is to be taken as a license to operate or a recommendation to infringe on patents.

CAUTION: Do not use DuPont materials in medical applications involving implantation in the human body or contact with internal body fluids or tissues unless the material has been provided from DuPont under a written contract or other acknowledgement that is consistent with the DuPont policy regarding medical applications and expressly acknowledges the contemplated use. For further information, please contact your DuPont representative.

DuPont's sole warranty is that our products will meet our standard sales specifications in effect at the time of shipment. Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted. TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, DUPONT SPECIFICALLY DISCLAIMS ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR NON-INFRINGEMENT. DUPONT DISCLAIMS LIABILITY FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES.

DuPont™, the DuPont Oval Logo, and all trademarks and service marks denoted with ™, SM or ® are owned by affiliates of DuPont de Nemours, Inc. unless otherwise noted.

© 2022 DuPont. All rights reserved.