

## LOXEAL 3461 (Polyolefins bonding)

### Description

Two-components medium speed curing acrylic adhesive, specifically designed for bonding Polyolefins (PP, PE, HDPE, LDPE ...) and other difficult-to-bond plastics, as PTFE, PBT, EPDM among them and in combination with other plastics such as ABS and PVC and to metals as well.

The adhesive contains micro-beads in order to control the bond-line thickness. It provides high shear and peeling strength.

It does not require any of the expensive surface pre-treatment, normally required to bond low surface energy plastics.

Mixing ratio 1:1.

### Typical physical properties

Part	A	B
Chemical composition:	methacrylate ester	methacrylate ester
Appearance:	translucent	transparent
Viscosity (+25°C - mPa s):	thixo paste	25.000
Specific weight (g/ml):	1,0	1,0
Mixing ratio (A+B):	1:1	
Maximum gap filling:	1 mm	
Shelf life:	6 months in unopened packaging at +25°C	

### Typical curing properties at +25°C

Pot life:	8 minutes*
Fixture time:	12 minutes
Full cure:	24 - 36 hours

\* Time detected using 2g of Part A +Part B with mixing nozzle

### Typical properties of the cured adhesive

Hardness Shore D: 40 - 50

Shear strength [MPa] (ISO 4587 at +25°C):

PE:	4 CF
HDPE:	10 CF
PP:	6 SF
ABS:	4 SF
PBT:	5 CF
PTFE:	1,5 CF
PVC:	5 SF
EPDM:	5 SF
Aluminum/PE:	5 CF

CF= Cohesive failure  
 SF= Substrate failure

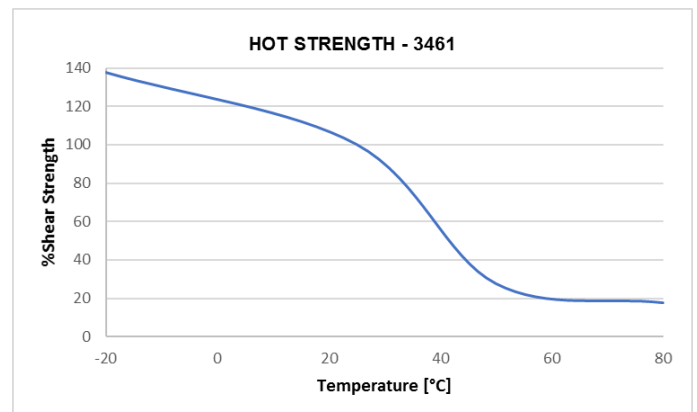
Peeling strength (after 72h at +25°C ISO 4578):

Aluminum 120 N/25mm

### Environmental resistance

#### Hot strength graph

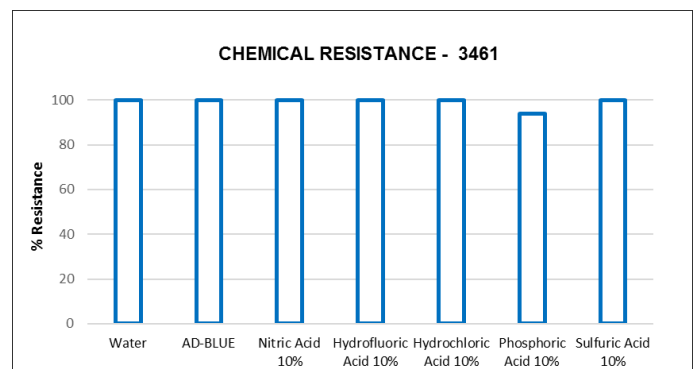
The graph below shows the mechanical strength (in %) vs. temperature. Specimen in PP - ISO 4587



#### Chemical Resistance

The graph below shows the change in resistance following exposure for 14 days, at a temperature of 25°C, to the indicated chemicals (concentration by volume).

In the case of AD-BLUE the samples were exposed for 5000h. PP specimens tested according to ISO 4587 at + 25°C.



**Warnings**

This adhesive is not approved for usage neither with pure nor with gaseous oxygen.

**Storage**

Keep the product in a cool and dry room, at no more than +25°C for 6 months. For a better preservation keep it stored refrigerated at temperature between +2°C/+7°C. To avoid contaminations do not refill containers with used product. For further information on applications, storage and handling contact Loxeal Technical Service.

**Safety, handling and disposal**

Consult Material Safety Data Sheet before use.

**Directions for use**

- **Surfaces preparation**  
For better results we recommend to degrease and clean the substrates.  
Lightly scratch the surfaces on metal and plastic substrates (not indicated on polyolefins) and then degrease and clean with a cleaner suitable for the substrate (i.e. Loxeal Cleaner 10 or Acetone or Isopropyl Alcohol)
- **Adhesive application**  
Products are available in dual cartridges packaging  
1. Check that the 2 parts of the adhesive come out homogeneously, pushing lightly on the regulator.  
2. Mix Part A and Part B using the static mixer (separately provided) after setting it on the cartridge. If mixing the 2 parts by hand, we recommend to pay attention to the mixing ratio given on the Technical Data Sheet.  
3. Apply the product; when using the static mixer, completely discard the first 3/4 cm of the extruded product.  
Avoid to mix big quantities of product because heating produced by chemical reaction may be dangerous and cause loss of product.
- **Pot life**  
Pot life of the mixed product varies according to the temperature. Higher temperature reduces the pot life and viceversa.
- **Assembly**  
Parts to be bonded shall be assembled immediately after product application and kept close until full polymerization without providing any mechanical stress.
- **Cleaning**  
Excess of product can be removed with Acetone or any other solvent based cleaner compatible with the substrates to bond. Application tools and dosing systems shall be cleaned before the product is hardened. Cured product can be removed only mechanically.

**Note**

The data contained herein, obtained in Loxeal laboratories, are given for information only; if specifics are required, please contact Loxeal Technical Department. Loxeal ensures abiding quality of supplied products according to its own specifics. Loxeal cannot assume responsibility for the results obtained by others which methods are not under Loxeal control. It is user's responsibility to determine suitability for user's purpose of any product mentioned herein. Loxeal disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Loxeal products. Loxeal specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.