

Preliminary

IST 56

Description

Loxéal IST 56 is a single component, solvent free, cyanoacrylate adhesive. It is developed for bonding parts where fast cure and thermal resistance are required. Suitable for bonding a variety of materials such as metals, plastics and elastomers where prolonged heat exposure at maximum 200°C without post curing is needed.

The complete cure of the adhesive is achieved after 24 hours at room temperature.

Typical physical properties

Composition: Ethyl cyanoacrylate
Appearance: Colorless to straw colored
Viscosity 20 rpm (+25°C - mPa s): 120
Specific weight (g/ml): 1,1
Shelf life: 6 months in original unopened packaging

Typical polymerization properties

The grade and the speed of curing depend on several factors such as the materials, the bond line gap, the environmental conditions (temperature and humidity), the amount of adhesive.

Fixture time at 23°C – 50% RH (seconds):

Mild steel (degreased)	20"
Mild steel (abraded)	15"
NBR	6"
BUNA	30"
Phenolic	7"
High density EPDM	15"
Low density EPDM	45"

Typical properties of cured product

Shear strength (MPa)
(After 24h at +25°C ISO 4587):

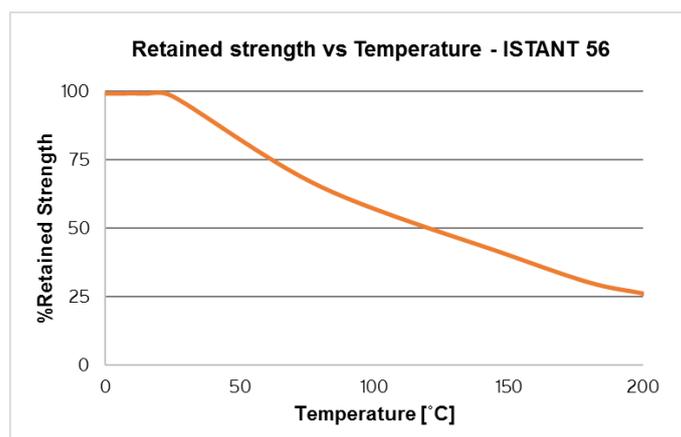
Mild steel (abraded)	20
Aluminum (abraded)	14
ABS	5.5 *
PVC	5.5 *
Polycarbonate	4

*Substrate Failure

Hot strength

The graph below shows the mechanical strength of the product (%) vs. temperature.

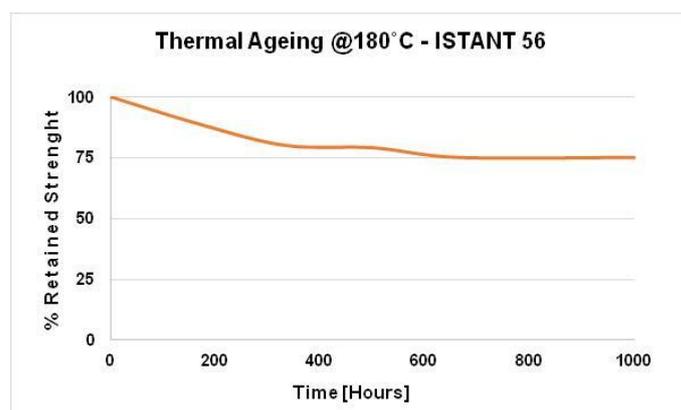
Specimen steel – ISO 4587



Thermal ageing

The graph below shows the mechanical strength of the adhesive (%) as a function of temperature and time.

Specimen steel – aged at temperature indicated and tested at +25°C according to ISO 4587.



Directions for use

• **Surface preparation**

For best results lightly scratch the surfaces of metal and plastic substrates (not recommended for polyolefins).

Degrease and clean with a cleaner suitable for the substrate (i.e. Loxeal Cleaner 10 or Acetone or Isopropyl Alcohol).

For the bonding of low surface energy plastics such as Polyolefins, PTFE, silicone rubbers and some types of rubber, apply Loxeal Primer 7 on the surface and wait for the solvent to evaporate.

• **Assembling**

Apply the adhesive on one surface and couple the parts as soon as the deposition is complete.

Press and hold the parts in place for the time necessary for the fixing. Do not apply stress to the joint before functional strength is achieved.

In presence of large gaps between the parts, the cure speed decreases. It is possible to use Activator 9 in order to increase the speed of curing.

To polymerize the adhesive outside the joint area, use Loxeal Activator 9 to speed up the reaction of the adhesive exposed to the air.

• **Cleaning**

Remove any surplus of adhesive outside the bonding area.

It's important to clean the mixing equipment before the adhesive has cured. Once the adhesive is cured, it is necessary mechanical action to remove it.

It is also possible to remove the cured cyanoacrylate by using Loxeal CR1 or CR2 following the instructions reported in their respective TDS.

Safety, handling and disposal

Consult the Safety Data Sheet before use.

This product is not recommended for use in pure oxygen and/or oxygen rich system and should not be selected as a sealant for chlorine and other strong oxidizing agents.

Storage

We recommend to store product in a cool and dry place at temperature non exceeding +20°C. For better and enhanced shelf life, keep product in a refrigerator at +2°C/+7°C. To avoid contaminations do not refill containers with used product. For more information on applications, storage and handling contact Loxeal Technical Service.

Notes

The data contained herein are provided for information only and are believed to be reliable. Loxeal cannot assume responsibility for the results obtained by others. It is user's responsibility to determinate the suitability of the adhesive for user's application. The user has the ownership to adopt such precautions as may be advisable for the protection of workers and property against any hazards that may be involved in the handling and use thereof.

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