

LOXEAL Istant 93

Description

Loxéal IST 93 is a medium viscosity cyanoacrylate adhesive, 1 part and solvent-free. It features an outstanding resistance to humidity, hot-humid conditions and contact with water. It provides excellent performances on a variety of substrates, such as metals, plastics and rubbers. Developed to ensure a good temperature resistance up to +120°C.

Typical physical properties

Composition:	ethyl cyanoacrylate
Colour:	clear
Viscosity Brookfield (+25°C - mPa s)	
Spindle 2, 20 rpm:	100
Specific weight (g/ml):	1,1
Shelf life:	12 months in original unopened packaging

Typical curing properties

Curing rate depends on the substrate used, on environmental conditions, such as the temperature and on the environmental humidity, on the gap and on the quantity of adhesive.

Fixture time at +23°C, 50% RH (seconds)

NBR	3
EPDM	10
Mild steel (abraded)	25
Aluminum	15
Nylon 6	15
ABS	10
PC	50
Phenolic Resin	10
PVC	15
Paper	10

Typical properties of cured material, after 24h, @+25°C

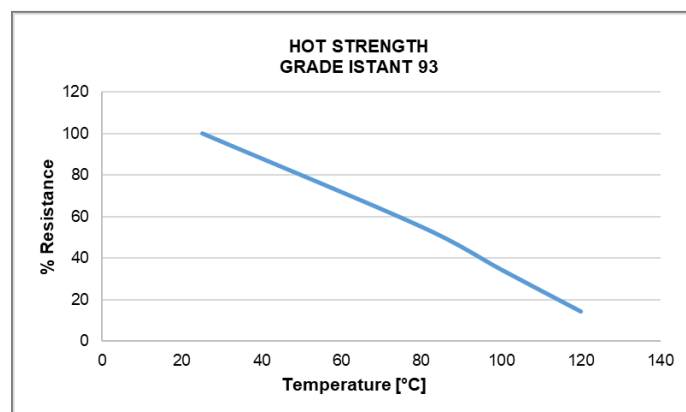
Tensile strength (ISO 6922), MPa	
Steel	10 CF
Shear strength (MPa): (after 24 hours at +25°C ISO 4587):	
Mild steel	22 CF
Aluminum	18 CF
Nylon 6	4 CF
PC	4 SF
PVC	6 SF

CF=Cohesive failure
 SF=Substrate failure
 AF=Adhesive failure

Environmental resistance

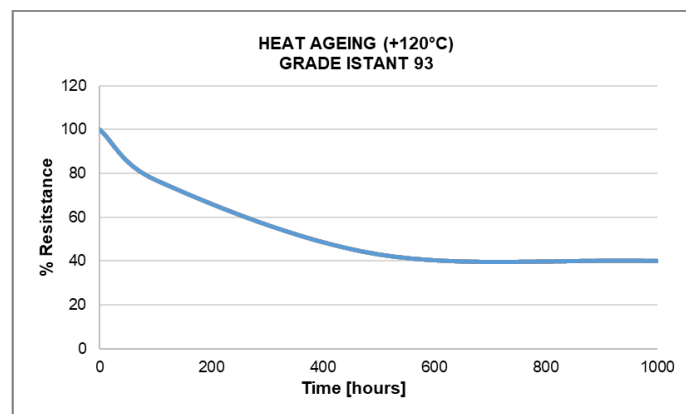
Hot strength

The graph below shows the mechanical strength of the product (%) vs. temperature. Specimen steel, cured 72h @+25°C, tested according to ISO4587.



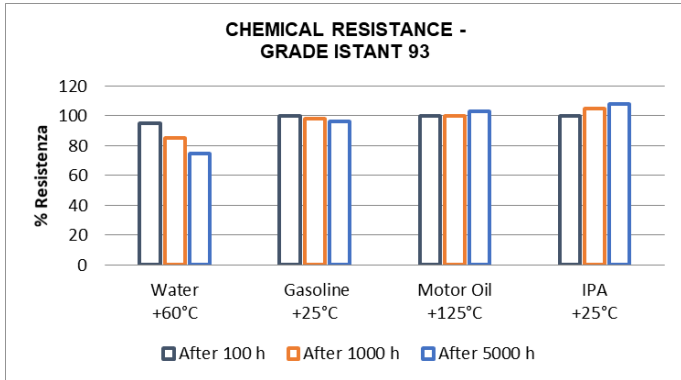
Heat ageing

The graph below shows the strength resistance behavior as a function of temperature/time. Specimen steel, cured 72h @+25°C, aged at the given temperature and tested at +25°C according to ISO4587.



Chemical resistance

The graph below shows the strength resistance retained after immersion in different substances. Specimen steel, cured 72h @+25°C, aged at the given temperature and tested at +25°C.



Heat and moisture resistance

The table below shows the shear strength retained after ageing at +85°C e 85%RH. Steel specimen, cured 72h @+25°C, aged at the given conditions and tested at +25°C"

Materiale	% initial strength at +25°C		
	T(°C)	Rh%	170h
Abraded Steel	85°C	85	90%

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.
- Assembly**
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 is 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.

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

Safety, handling and disposal

Consult the Safety Data Sheet before use. This adhesive is not approved for usage neither with pure nor with gaseous oxygen. It is not suitable to be used as a sealant for chlorine and other strong oxidizing agents.

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.

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