



Frame Fast™ 290

General Properties

Technology/Base	Ethyl-2-cyanoacrylate
Type of Product	Adhesive
Curing	Moisture curing
Mechanical Properties	Semi-structural
Colour	Transparent
Product Series	Frame Fast®
Fields of Application	Milling industry
Product Benefits	Surface insensitive

Typical Technical Data

General

Physical Properties		
Density	1.06 g/cm ³	
Flash Point	82.5 °C	
Processing Guidelines and Parameters		
Viscosity	1,200 mPa·s to 1,450 mPa·s	158 1/s, cone-plate, 20 °C
Setting Time	3 s to 7 s	EPDM
Setting Time	10 s to 40 s	steel
Service Conditions		
Service Temperature	-55 °C to 95 °C	
Solvent Resistance		
Alcohol	excellent	e.g. Ethanol, Methanol, Isopropanol
Aliphatic Hydrocarbons (Alkanes)	very good	e.g. Petrol, Heptanes, Hexane
Aromatic Hydrocarbons	very good	e.g. Benzyl, Toluol, Xylol
Ester (Aliphatic)	poor	e.g. Ethylacetate
Halogenated Hydrocarbons	poor	e.g. Methylenchloride, Chloroform, Chlorobenzol
Ketone	poor	e.g. Acetone, Benzophenone
Weak Aqueous Acid	excellent	e.g. diluted nitrite, muriatic acid, sulphuric acid, phosphoric acid
Concentrated Acid	poor	e.g. nitric acid, muriatic acid, sulfuric acid, phosphoric acid
Weak Aqueous Base	excellent	e.g. diluted sodium hydroxide solution, caustic potash solution
Concentrated Base	poor	e.g. sodium hydroxide solution, caustic potash solution
Water	very good	

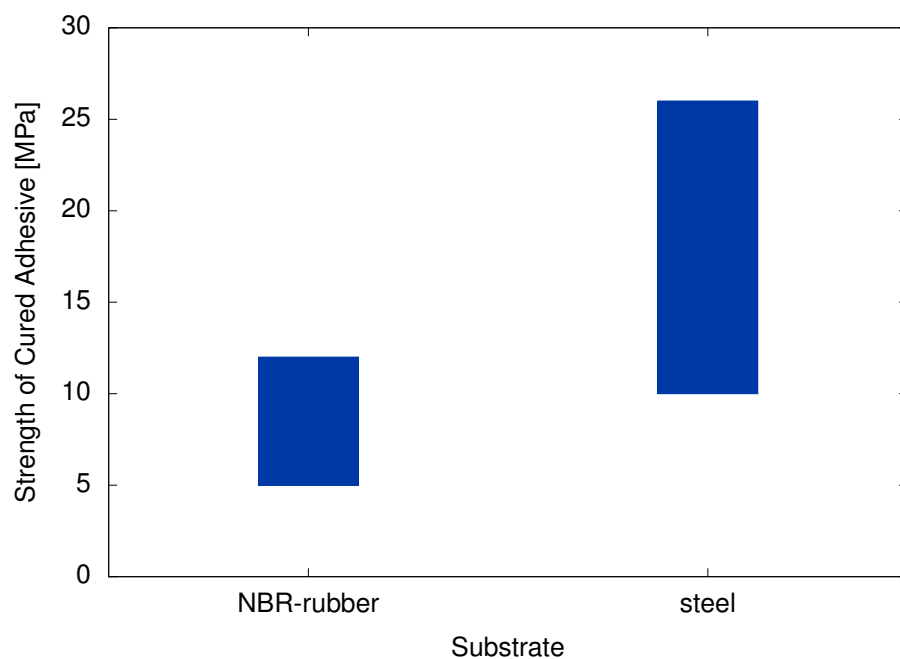


Figure 1: Strength of Cured Adhesive

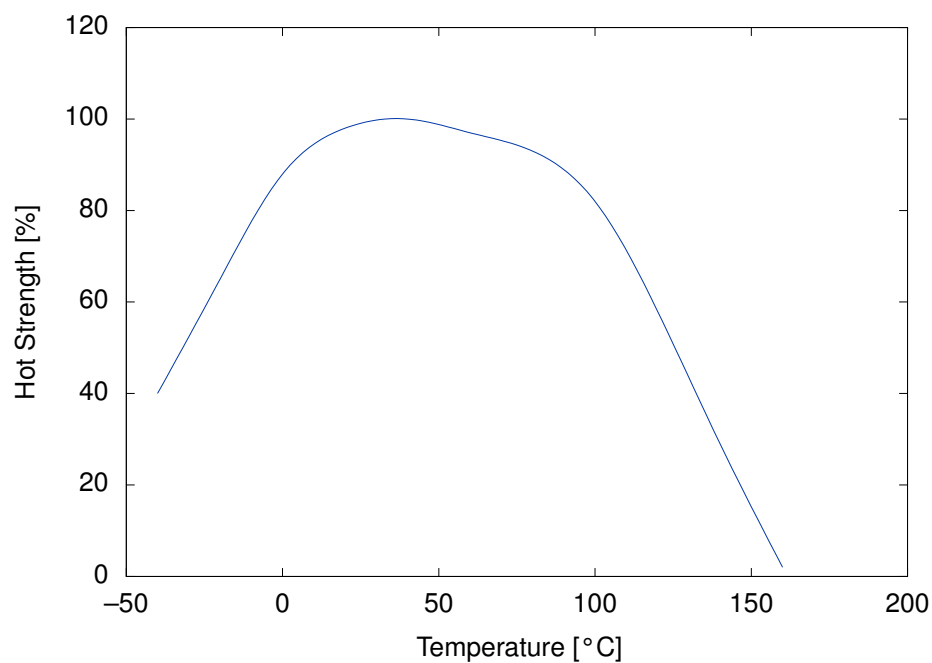


Figure 2: Hot Strength (%RT strength, tested at temperature)

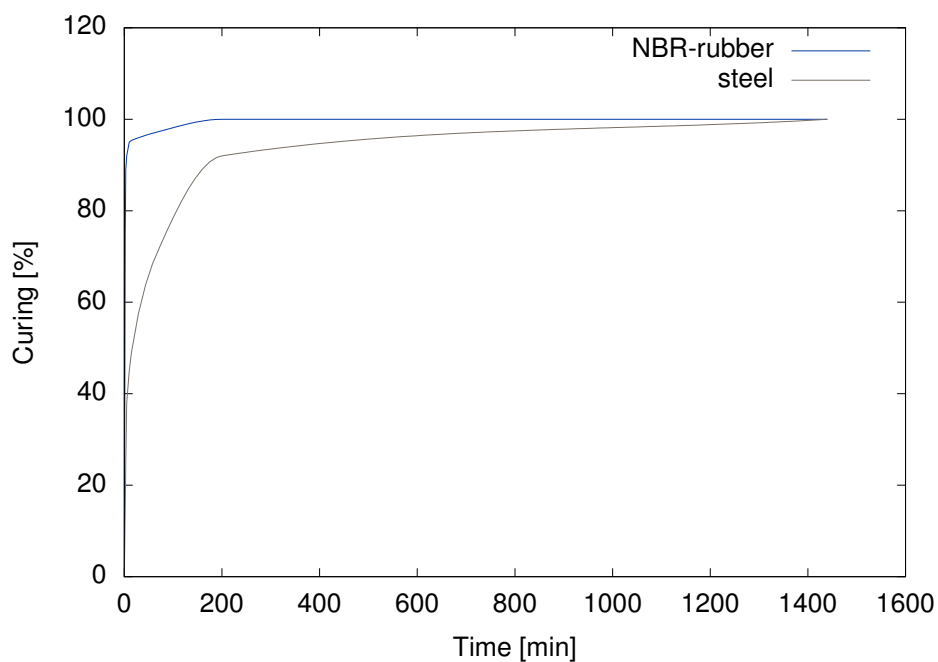


Figure 3: Time Until Full Cure

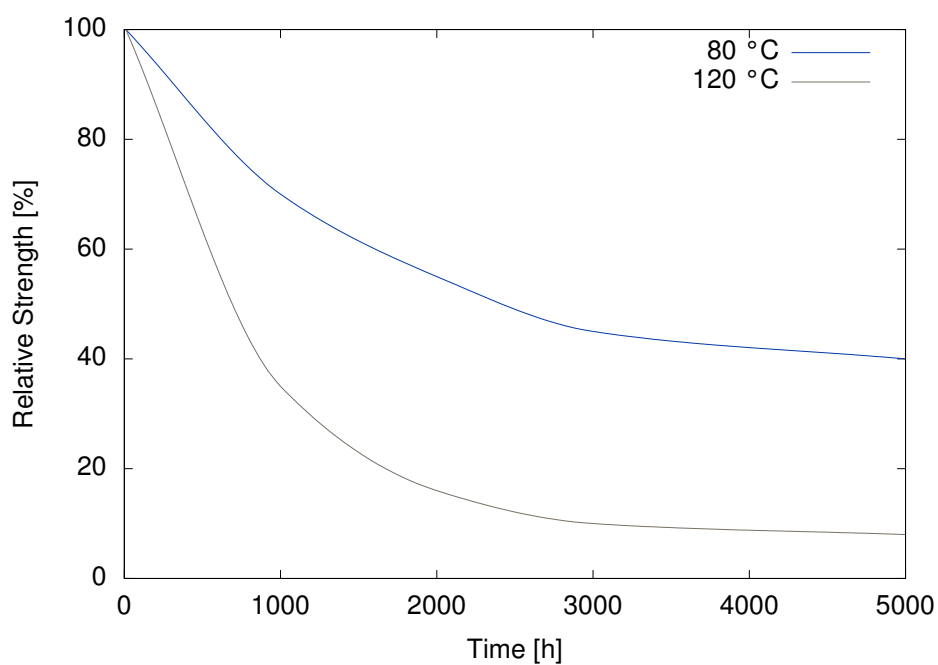


Figure 4: Heat Ageing on Steel (aged at temp. indicated and tested @ 20°C)

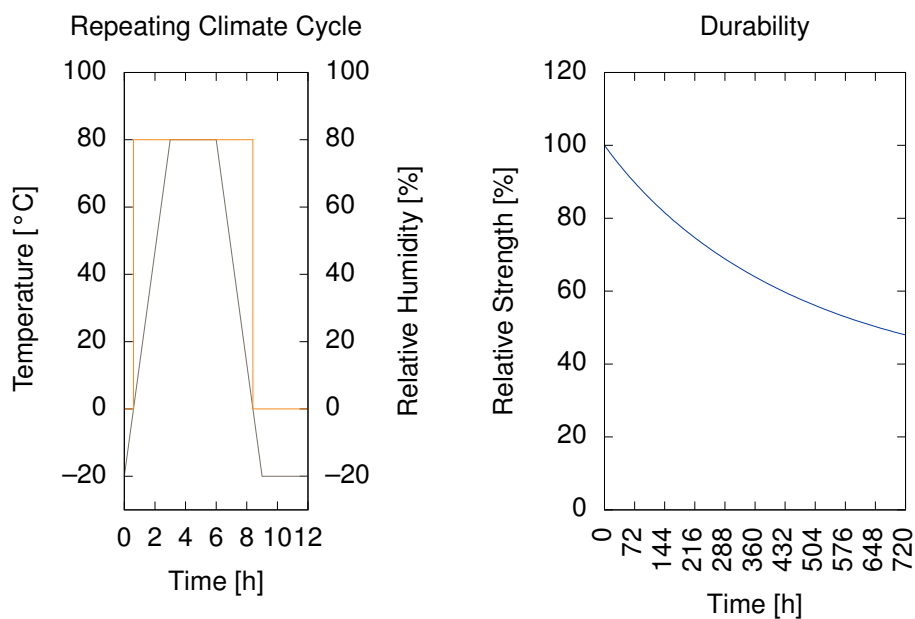


Figure 5: Durability after Alternating Climate Storage

Product Properties

Processing

Suitable Substrates	Various galvanized steels Various aluminium alloys Various steel alloys Various plastic substrates Various other substrates
Consistency	Liquid High viscosity
Surface Requirements	Dry Clean Free of grease
Surface Cleaning	Vibra-TITE® 9999 Cleaner Spray Vibra-TITE® 9999 Liquid Cleaner
Suitable Primer	Vibra-TITE® 9056 Vibra-TITE® Conditioner Pen
Activator	Vibra-TITE® 9090 Vibra-TITE® 9096
D-Bonder	Vibra-TITE® 9060 Vibra-TITE® 9065 Vibra-TITE® 9066



Additional Information

Technical User Information

Cyanoacrylates are fast setting, one component and solvent free adhesives. Polymerization is initiated by present humidity. Best results are given between 40 to 70 % relative humidity and 20 to 24 °C ambient temperature.

The following H.B. Fuller® standard product series are available:

- **Powerdrop®** (stabilised ethyl ester):
For hobby and DIY applications.
- **Elastomer and Plastic** (ethyl ester):
Fast setting industrial cyanoacrylates.
- **Neomer** (surface insensitive ethyl ester):
Cyanoacrylates for wood, leather etc.
- **xtraflex** (rubber toughened ethyl ester): Partly flexible, heat and impact resistant.
- **Metal** (ethyl ester):
High performance on metal to rubber or metal to plastic.
- **Low Odour** (methoxy ester):
Low odour and low blooming characteristics.
- **Medical** (butyl- and octyl ester):
Skin bonding in medical industrie.
- **Frame Fast™**
For fast bonding of screens (plastics, stainless steel) on frames (aluminium, stainless steel, wood).

Storage

Frame Fast™ 290 should be used within the shelf life specified on the packaging. The storage stability applies to material stored under appropriate conditions only (original unopened containers, recommended

storage temperature). This product should be stored unopened in a cool, dry place out of direct sunlight. Refer to the Technical Data section of this document for optimum storage temperatures.

Safety

Please read our Safety Data Sheet (SDS) of each product before use.

Processing

Surfaces should be clean and free from grease. Dispense adhesive to one surface only. Apply only enough to leave a thin film layer after compression. Press parts together and hold firmly until adhesive has fixtured. Maximum strength is attained typically in 24 hours. Product should be allowed to develop full strength before subjecting to any service loads.

Disposal

Please refer to the Safety Data Sheet (SDS) for disposal instructions.

Additional Programme

To support certain applications H.B. Fuller® offers a range of additional products. Refer to the product properties section of this document for suitable Activators and Cleaners.

LINOP Equipment

H.B. Fuller® offers by means of the LINOP Equipment range suitable dosing and LED based curing devices. We also refer to suitable dosing tips which help an economical use of the adhesives (also if used manually).

www.hbfuller.com

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