Technical Datasheet

Cyanolit®290 WR

Product Description

Modified cyanoacrylate | 1 part | solvent-free | room temperature curing

- Bonding of different substrates
- Good adhesion to plastic and metal
- Fast curing
- Waterproof
- Resistant to chemicals
- Resistant to humidity
- Certified according to ISO 10993-5

Curing Properties

Curing takes place without heat supply or pressure. The classical one-component cyanoacrylates react with moisture, which is adsorbed as a moisture film on the material surfaces, in a few seconds.

The curing speed depends on the gap width and the humidity level. A small gap width and a high humidity accelerate the setting process.

After a short time Cyanolit® reaches high strength. The fixture time has been determined according to PE-Standard 074. The material continues to harden 12 hours after gluing. Only after this time is the optimum media resistance achieved.

The following table describes the setting times on different substrates. The curing times are only provided as a guideline.

Substrate	Fixture time [s]
Aluminum ($AlMg_3$)	20
Steel (sandblasted)	20
ABS	40
PC	60
PVA	60

Technical Datasheet

Cyanolit®290 WR

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Resin	Ethyl-2-cyanacrylate
Appearance	Transparent

Uncured Material	
Viscosity [mPas] (Brookfield LVT, 25 °C, Sp.2/60rpm) *PE-Standard 001*	400

Cured Material	
Temperature resistance [°C]	-40 – 120
Glass transition temperature - DSC [°C] *PE-Standard 009*	50
Lap shear strength (steel/steel, sandblasted) [MPa] *PE-Standard 013*	16
Lap shear strength ($AlMg_3$/$AlMg_3$) [MPa] *PE-Standard 013*	14
Lap shear strength (ABS/ABS) [MPa] *PE-Standard 013*	6*
Lap shear strength (PVC/PVC) [MPa] *PE-Standard 013*	9*
Lap shear strength (PC/PC) [MPa] *PE-Standard 013*	2

*Substrate failure

After storage at 85°C/85% rel. humidity (steel/steel, sandblasted)	
Lap shear strength [MPa] *100h* *PE-Standard 013*	9
Lap shear strength [MPa] *500h* *PE-Standard 013*	4

After storage at 60°C in water (steel/steel, sandblasted)	
Lap shear strength [MPa] *100h* *PE-Standard 013*	10
Lap shear strength [MPa] *500h* *PE-Standard 013*	9
Lap shear strength [MPa] *1000h* *PE-Standard 013*	9

After storage at RT in IPA (steel/steel, sandblasted)	
Lap shear strength [MPa] *100h* *PE-Standard 013*	17

Lap shear strength [MPa] *500h* *PE-Standard 013*	17
Lap shear strength [MPa] *1000h* *PE-Standard 013*	16

After storage at 40°C in motor oil 5W-30 (steel/steel, sandblasted)	
Lap shear strength [MPa] *100h* *PE-Standard 013*	16
Lap shear strength [MPa] *500h* *PE-Standard 013*	14
Lap shear strength [MPa] *1000h* *PE-Standard 013*	14

Transport/Storage/Shelf Life

Package type	Transport	Storage	Shelf life*
Bottles	At room temperature max. 25°C	0 °C – 10 °C	At delivery min. 4,5 months max. 9 months
Pipettes			

Store in original, unopened containers!

Technical Datasheet

Cyanolit®290 WR

Instructions for use

Surface preparation

The surfaces to be bonded should be free of dust, oil, grease, mold release, or other contaminants in order to obtain an optimal and reproducible bond. For cleaning we recommend the cleaner IP® from Panacol, or a solution of Isopropyl Alcohol at 90% or higher concentration. Substrates with low surface energy (e.g. polyethylene, polypropylene) must be pretreated in order to achieve sufficient adhesion.

Application

Our products are supplied ready to use. Depending on packaging they can be applied by hand directly from the container or by using compatible dispensing systems and automation.

Cyanoacrylate adhesives react very quickly with humidity (20% - 80%) or the moisture film on the materials. It is therefore advisable to wear gloves and goggles when handling larger quantities. Cyanolit® is applied punctiform - one or more drops, depending on the size of the surface, onto one of the joining parts. The second joining part is fixed with slight pressure, whereby the adhesive is distributed into a thin film. Acid surfaces prevent or retard the curing, while basic surfaces (pH> 7) accelerate curing.

The application can take place directly from the tip of the dosing bottle, but also with dosing devices. Since the achievable strength depends on the application quantity, an even dosage must be considered.

For assistance with dispensing and curing questions, please contact our Applications Engineering department. To obtain best results, the adhesive and substrates to be bonded may not be cold and should be allowed to warm to room temperature prior to processing.

Storage

Store uncured product in its original, closed container in a dry location. Any material removed from the original container must not be returned to the container as it could be contaminated. Panacol cannot assume responsibility for products that were improperly stored, contaminated, or repackaged into other containers.

Handling and Clean-up

For safe handling information, consult this product's Material Safety Data Sheet (MSDS) prior to use. Uncured material may be wiped away from surfaces with organic solvents. Do not use solvents to remove material from eyes or skin!

Technical Datasheet

Cyanolit®290 WR

Disclaimer

The product is free of heavy metals, PFOS and Phthalates and is conform to the current EU-Directive RoHS.

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