INSTANT TOUGHT BLACK MV

ONE COMPONENT, MEDIUM VISCOSITY, BLACK TOUGHENED ADHESIVE

TECHNICAL SHEET - 05/12/2025

SMART BENEFITS

- Instant Adhesion
- High Strength
- Multi-material adhesion
- Rubber and metal bonding
- Impact resistance
- Peel resistance

DESCRIPTION

Instant Tough Black MV is a black rubber-toughened instant adhesive designed for high-performance bonding applications across a wide range of materials, including metals and rubbers. The product is specially formulated to provide increased impact and peel resistance, along with improved flexibility.

METHOD OF USE

- Before applying the adhesive, make sure the surface is clean, dry and free of grease.
- Apply adhesive to one of the surfaces. Do no use items like tissues or a brush to spread the adhesive.
- Assemble the parts with proper alignment as the short fixture time leaves little opportunity for adjustment.
- Bonds should be held fixed or clamped until adhesive has fixture.
- Product should be allowed to develop full strength before subjecting to any service loads (typically 24 to 72 hours after assembly, depending on bond gap, materials and ambient conditions).

PROPERTIES

TECHNICAL DATA

CHARACTERISTICS		VALUE
Base		Ethyl Cyanoacrylate
Viscosity Brookfield, 25 °C, Spindle 21, 100 rpm	**[mPa·s]**	240 – 400
Color		Black colored liquid
Specific Gravity ASTM D1875 @ 23 °C	**[g/ml]**	1.10
Impact Resistance (after 24 h) - ISO 9653	**[kJ/m²]**	22.5

FIXTURE TIME @ 23 °C

Substrate		
Beech Wood	**[s]**	230 – 300
ABS	**[s]**	50 – 90
Polycarbonate	**[s]**	60 - 170
Aluminium A5754	**[s]**	30 - 200
Mild steel	**[s]**	60 - 140
NBR*	**[s]**	10 - 40
EPDM*	**[s]**	5 - 40
Neoprene*	**[s]**	15 - 40

*1 Kg load for 10 s.

BONDING PERFORMANCE
Tensile Shear strength (ISO 4587) - Cured 24 h @ 23°C

Substrate		
Beech Wood	**[N/mm²]**	13 – 16 *
ABS	**[N/mm²]**	9 - 11 *
Polycarbonate	**[N/mm²]**	12 - 14 *
PVC	**[N/mm²]**	12 - 15 *

Phenolic	**[N/mm²]**	11 - 14 *
Aluminium A5754	**[N/mm²]**	18 - 22
Grit Blasted Mild steel (GBMS)	**[N/mm²]**	18 - 24
NBR	**[N/mm²]**	0.9 – 1.1 *
EPDM	**[N/mm²]**	0.9 – 1.2 *
Neoprene	**[N/mm²]**	0.7 – 0.9 *

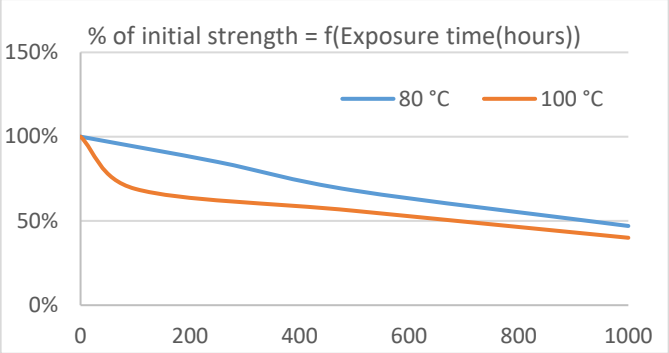
*Substrate failure

BONDING PERFORMANCE Peel strength (ISO 11339) - Cured 24 h @ 23°C		
SUBSTRATE		**@ 22 °C**
Mild Steel	**[N/mm²]**	2.3 – 3.0
EPDM	**[N/mm²]**	0.7 – 0.9 *

* Substrate Failure

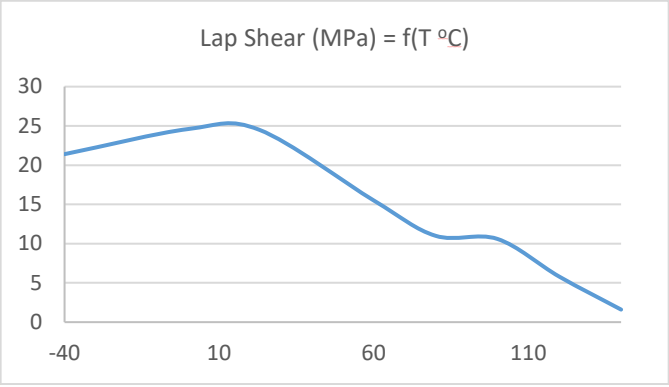
HEAT AGEING

The graph below shows the heat aging results. The adhesive was aged at the temperature indicated, tested at 22 °C and cured for one week. The lap shear strength was tested according to ISO 4587 on grit-blasted, mild steel (GBMS).



HOT STRENGTH

The graph below shows the adhesive performance on grit-blasted mild steel (GBMS) at various temperatures. The adhesive was cured for one week at 22 °C. The lap shear strength was tested according to ISO 4587. The strength test was performed in a climatic chamber that was set up for 30 minutes before testing at the indicated temperatures.



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CHEMICAL/SOLVENT RESISTANCE

Aged under conditions indicated and tested on GMBS.

% of Initial Strength vs. Exposure Time (hours) and vs. Type of Contaminant				
Testing on GBMS		**% of Initial Strength**		
ENVIRONMENT	**TEMP**	**100 h**	**500 h**	**1000 h**
Water	23 °C	67	51	51
Motor Oil	82 °C	62	56	43

HUMIDITY RESISTANCE

Aged under conditions indicated and tested @ 23 °C after curing for 1 week @ 23 °C.

% of Initial Strength vs. Exposure Time (hours)				
95% HR, 40 °C		**% of Initial Strength**		
ENVIRONMENT	**TEMP**	**100 h**	**500 h**	**1000 h**
GBMS	40 °C	71	51	48

SMART HELP

Please contact your local representative