



WINBOND INTERNATIONAL LTD

FC 205 HMLC

Technical Data Sheet – FC 205 HMLC
Ver. 5.0 July 2021

High modulus, low conductive, ultra fast curing one-part polyurethane direct glazing & structural bonding adhesive. 30 minute Drive Away Time, FMVSS 208/212 certified

DESCRIPTION

FC 205 HMLC is a high modulus, low conductive, ultra-fast curing one-component, flexible, high performance polyurethane adhesive for vehicle glass direct glazing. It is specifically designed to give a fast and safe drive-away time on vehicles fitted with airbags in 30 minutes.

AREAS OF APPLICATION

Purposely designed for bonding windscreens in the Auto Glass Replacement aftermarket, side and rear windows to passenger cars, trucks, tractors and special vehicles. It is ideal for direct glazing on vehicles where high shear modulus and non-conductive properties are required. Also used for bonding fiberglass reinforced plastic elements (roofs, side and frontal panels) on vehicles. It can be used in all applications where a strong elastic-structural bonding to elements of different compositions (automotive topcoat paint, metal sheets, fiberglass and reinforced plastic) is necessary and that undergo a strong mechanical or thermal stress.

FEATURES

- One-component polyurethane
- Solvent free, odourless
- Fast curing
- Suitable for cold and warm application
- Outstanding thixotropy, high decking, non-sagging
- High viscosity, high green strength
- High Modulus - maintains torsional rigidity and increases the vehicles NVH values
- Capable of withstanding high dynamic stresses
- Non-conductive, low volume resistivity
- Suitable for use with integral aersials
- Prevents contact corrosion in aluminium-body vehicles

DRIVE AWAY TIME (DAT) information

TÜV Crash Tested

- Drive Away Time: 30 minutes
- On vehicles fitted with both driver and passenger airbags

FC 205 HMLC is compliant to Federal Motor Vehicle Safety Standard 208/212 and all long-term durability requirements according to the full range of laboratory Data.



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TECHNICAL DATA

Appearance	Non-sag thixotropic paste	
Color	Black	
Chemical nature	Polyurethane	
Curing Mechanism	Moisture-curing	
Curing through volume [mm] (NPT Method 07) (24h - 23°C and 50% RH)	3.0	ca.
Hardness Shore A (DIN 53505)	60	ca.
Density [g/cm ³] (NPT method 06) (23°C and 50% RH)	1.32	ca.
Skin time [min] (NPT Method 17) (23°C and 50% RH)	15	ca.
Tensile strength [N/mm ²] (ISO 37 DIN 53504)	8.6	ca.
G modulus at 10% [MPa]	2.3	ca.
Elongation at break [%] (ISO 37 DIN 53504)	350	ca.
Electrical volume resistivity [Ω·cm] (DIN IEC 93)	10 ¹⁰	
Application temperature [°C]	From +5 to +40	
Temperature Resistance [°C]	From -40 to +100, with brief points up to +140	

APPLICATION

Fit the bag into a manual or pneumatic air operated gun (provided with telescopic piston). The surfaces to be treated should be perfectly clean, dry, and free from dust and grease. It is necessary to treat the windscreen and its bonding surface according to Winbond application guidelines, using Winbond Glass Wipe and Winbond Combo Glass Paint Primer. It is advisable to carry out preliminary adhesion tests on the support. Specific guidance regarding the use of primers may be obtained by submitting substrate samples to our laboratories.

Do not cure in the presence of curing silicone sealants. Avoid contact with alcohol and other solvent cleaners during cure. When applying sealant, avoid air-entrapment. Since system is moisture-cured, permit sufficient exposure to air. Bonded elements may require additional holding or support during curing period. Tooling and finishing must be carried out within the tack-free time of the sealant.



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CLEANING OF EQUIPMENT AND PERSONAL PROTECTIVE MEASURES

Clean the tools used with acetone or solvent. When the adhesive has not yet hardened, it can be removed using paper or a cloth. Once hardened, the product can only be removed mechanically. Avoid skin contact by using appropriate gloves. If it comes in contact with the skin, remove immediately and wash with soap and water.

PACKAGING

Alu cartridge 310ml – 12 pieces per box
Foilpack 400ml – 12 pieces per box
Foilpack 600ml – 20 pieces per box

STORAGE AND SHELF LIFE

FC 205 HMLC can be stored for 12 months in its original packaging (unopened container) between 10°C and 25°C in a cool, dry place. The storage temperature should not exceed 25°C for extended periods of time. Keep away from wet areas, direct sunlight and heat sources.

GENERAL INFORMATION

The information contained in this technical data sheet is to the best of our knowledge correct, being based on our knowledge and experience to date and cannot be used as a guarantee, due to the various different materials present on the market and the fact that the application conditions are not under our direct control and supervision. Winbond International Ltd, however, guarantees constant product quality. Winbond International Ltd, has the right to modify or up-date this technical data sheet according to requirements. Customers are kindly requested to verify that they are in possession of the latest version.

ALWAYS CONSULT THE MATERIAL SAFETY DATA SHEET BEFORE USING THE PRODUCT