

# DINITROL Direct FW

## Primerless to Glass Urethane Adhesive

Together with the corresponding pre-treatments as for example primers and or/ activators, DINITROL Direct FW is designed for the use in replacing polyurethane direct-glaze automotive glass parts and other bondings in vehicle manufacturing.



- » **Primerless to glass**
- » **3-hour safe drive away time**
- » **OEM approved**
- » **Fast cure**
- » **Good decking**
- » **Solvent and PVC free**
- » **Prevents contact corrosion in aluminum-bodied vehicles**
- » **Crash test approved acc. FMVSS 212**
- » **Ageing and weather resistant**



<p><b>Equipment</b></p> <p><b>DINITROL MASTER TOOL</b>  <b>310 ml Cartridge &amp; 600 ml Foilwrap</b>                  Art. No. 1736500</p> <p><b>DINITROL MASTER TOOL</b>  <b>310 ml Cartridge &amp; 400 ml Foilwrap</b>                  Art. No. 1736600</p> <p><b>INDUSTRIAL NITRILE GLOVES 10-P</b>                  Art. No. 1734100 (XL)                  Art. No. 1734300 (LG)</p>
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<b>DINITROL Direct FW</b>			
<b>Art. No.</b>	<b>Size</b>	<b>Package</b>	<b>Color</b>
1250677	600 ml	Foilwrap	Black

a brand of



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# DINITROL Direct FW

## Technical Details

### Characteristics

DINITROL Direct Foil is a one component cold-applied polyurethane adhesive designed for direct windshield replacement. The properties of the adhesive DINITROL Direct Foil combined with the corresponding DINITROL pre-treatments are the following:

### Features

- Primerless to glass
- 3-hour safe drive away time
- Fast cure
- Good decking
- Solvent and PVC free
- Prevents contact corrosion in aluminum-bodied vehicles
- OEM approved
- Crash test approved acc. FMVSS 212
- Ageing and weather resistant

### Method of use

The application is done by extrusion out of foilwraps and cartridges. The use of the product is suitable only for experienced and professional users. For other applications, tests must be performed to ensure material and adhesion compatibility to the substrates.

### Surface Preparation

All bonding surfaces must be clean, dry and free from all traditional and non-traditional contamination. Thoroughly clean the glass bonding surface with DINITROL 582 in order to remove all contaminants. Abrading the glass and/or ceramic frit bonding surface will enhance the adhesive and primer bond. Any surface rust on pinch weld bonding area must be completely removed. Bare metal, scratches and painted surface areas on the vehicle must be primed as documented in DINITROL AGR training manual.

### Application

We recommend to apply the adhesive with a piston style application gun. For easy processing, use the adhesive at room temperature. For a constant adhesive layer thickness, it is advisable to apply the adhesive in the form of a triangular bead. The glass must be inserted before skin-formation starts. Warmer temperatures with higher relative humidity can shorten the open time, while colder temperatures and lower relative humidity can lengthen the open time.

### Health and Safety

Before using DINITROL products, see the associated safety data sheet (MSDS.) Here, the user can find the information they need for the safe processing, storage and disposal of chemical products and contains physical, toxicological and other safety-relevant facts.

### Storage

Product should be stored between 0–35 °C (0°–95 °F).

## Technical Details

Chemical base	1 component polyurethane
Colour	black
Cure mechanism	humidity-curing
Density (DIN 53217-4)	ca. 1'200 kg/m <sup>3</sup>
Non-sag properties	good
Application temperature	0°F–115°F
Skin formation time <sup>1</sup>	approx. 30 min.
Open time <sup>1</sup>	approx. 25 min.
Rate of cure <sup>1</sup>	approx. 3–4 mm / 24 h
Shore A Hardness (DIN 53505)	approx. 62
Tensile strenght (DIN 53504)	approx. 9 MPa
Elongation at break (DIN 53504)	approx. 350 %
Tear strenght (DIN EN 1465)1	approx. 11 N/mm
Tensile shear strength (DIN EN 1465)	approx. 6 MPa
G-modulus (DIN 54451)	approx. 1.8 MPa
Temperature resistance short-term (approx. 1 h)	< 176°F < 248°F
Shelf life Cartridge/Foilwrap	12 months
Safe-Drive-Away-Time <sup>1)</sup> (FMVSS 212)	with or without passenger airbag: 3 hrs (See Safe-Drive-Away-Chart)
Available in	310 ml cartridge, 600 ml foilwrap

1) 73°F / 50% rh

### Drive Away With Passenger Side Airbag

RH/TEMP	> 70%	> 50%	> 30%	> 10%
> 85°F (30°C)	3 hrs	3 hrs	3 hrs	8 hrs
> 73°F (23°C)	3 hrs	3 hrs	4 hrs	10 hrs
> 60°F (15°C)	3 hrs	3 hrs	5 hrs	16 hrs
> 50°F (10°C)	5 hrs	5 hrs	12 hrs	24 hrs
> 40°F (5°C)	9 hrs	9 hrs	18 hrs	30 hrs

### Without Passenger Side Airbag

RH/TEMP	> 70%	> 50%	> 30%	> 10%
> 85°F (30°C)	1 hr	1 hr	2 hrs	5 hrs
> 73°F (23°C)	1 hr	1 hr	2 hrs	6 hrs
> 60°F (15°C)	2 hrs	2 hrs	3 hrs	12 hrs
> 50°F (10°C)	4 hrs	4 hrs	8 hrs	18 hrs
> 40°F (5°C)	7 hrs	9 hrs	15 hrs	30 hrs

**For all relevant safety advices please read the material safety data sheet or the packaging label.**

\* Application at or below 40°F is Not Recommended

All data and recommendations are the result of careful tests by our laboratory. They only can be considered as recommendation which corresponds to the level of experience of today. The data are given in good faith. However, in view of the multiplicity of possible application and working methods we are not in a position to assume any responsibility or obligations deriving from the misuse of our products. Therefore, a contractual legal relationship is not justified, and there are no secondary obligations arising from any purchase contracts.