PRODUCT INFORMATION

7412

LORD Engineered Adhesives

Moisture-Cure, Urethane Adhesive

Description
Lord® 7412 is a 100% solids, single-component, moisture-cure adhesive, used for various thermoplastic substrates and fabrics.

Features and Benefits
Non-flammable - contains no solvents and does not require explosion proof equipment.

Single Pack - requires no mixing and produces less waste.

Moisture Cure - requires no heat or ovens for curing.

Environmental and Chemical Resistance - resists sunlight, weathering, humidity and salt spray. Once cured, it is solvent resistant. Painting and most cleaning processes do not effect bond strength.

Surface Preparation
Remove contamination from surfaces to be bonded. Use solvent wiping, scuffing or sanding for optimum adhesion.

Mixing
Lord 7412 adhesive does not require mixing.

Application
Lord 7412 adhesive at 100% solids or diluted with solvent to 60% TSC is an excellent adhesive for bonding polyester reinforcement to an extruded Hytrel® core. At 100% solids, Lord 7412 adhesive offers excellent adhesion between Hytrel or TPU (thermoplastic urethane) and polyester or Kevlar® reinforcement. For adhesion between polyester or Kevlar and a nylon 11 core, a solution of Lord 7412 adhesive works best.

Typical Properties* of Lord 7412 Adhesive

Appearance	Wax-like
Viscosity	High viscosity paste
Density	
kg/m^3	1043 - 1115
lb/gal	8.7 - 9.3
Percent Solids	100%
Flash Point	>93°C (200°F)
Tensile Strength	37.9 MPa (5500 psi)
Percent Elongation	380%
Tear	132 kN/m (750 pli)
Shelf Life	6 months from date of shipment, unopened container, 4°C - 27°C (40°F - 80°F) storage temperature.

*Data is typical and not to be used for specification purposes.

Bond values between 30 and 40 pounds (dead load test) will result between extruded Hytrel and polyester reinforcement, peel values down the length of the hose equal 3.5 - 5.3 kN/m (20 - 30 pli).

Heat Lord 7412 adhesive to temperatures of 38°C - 93°C (100°F - 200°F) or dilute with a solvent before applying. Accurate temperature control is a critical factor in maintaining an acceptable application viscosity. Two methods of heating can be used to reduce the viscosity; oven or hot melt type dispensing equipment. Either method requires the ability to adjust the set point and allow the user an appropriate level of process control.

There are three application methods that can be used:

Method #1: Oven method - preheat Lord 7412 adhesive in the shipping container then pour into the reservoir or pump directly from the shipping container onto the part to be bonded.

Method #2: Thermoplastic Hose Production Line - equipment is available which will heat and dispense the adhesive onto the extruded core prior to applying the extruded jacket. An example of this method is hot melt dispensing equipment.

Method #3: Solvent dilution - cutting the adhesive with solvent to reduce the viscosity is only recommended for adhering the reinforcement yarn to the extruded core. A 60% solids solution of MeCl, or a 50:50 solution of dry MEK and toluene is suggested.

Clean Up

Use MEK or acetone to clean up uncured adhesive. Once cured, use mechanical methods (i.e., sanding or grinding) to clean up.

Packaging

- 1/2 Pint Container (0.24 Liter)
- 1 Gallon Container (3.8 Liter)
- 5 Gallon Pail (19 Liter)

Storage

For maximum shelf life, store Lord 7412 adhesive at 4°C - 27°C (40°F - 80°F) and cap the container with dry nitrogen each time material is removed. Never return dispensed material to original container.

Lord 7412 is a moisture-sensitive adhesive, therefore cap with dry N_2 each time container is opened. If not capped, a thin crust of cured adhesive will form that will need to be removed before use. When Lord 7412 adhesive is dispensed from a drum, return air to the drum through a drying tube.

Cautionary Information

Before using this or any Lord product, refer to the Material Safety Data Sheet (MSDS) and label for safe use and handling instructions.

For industrial/commercial use only. Must be applied by trained personnel only. Not to be used in household applications. Not for consumer use.

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