

Printing & Packaging Functional Packaging Coatings

Technical Data Sheet

Joncryl[®] HSL 9012 Preliminary Data Sheet



Product Description	Joncryl [®] HSL 9012 is an acrylic copolymer emulsion for use in waterbased heat seal lacquers for pharmaceutical blister lidding foil sealed against PVC, PVDC-coated PVC and PET.
Key Features & Benefits	<ul style="list-style-type: none">- Economical- Low odor- Low activation temperature
Chemical Composition	Acrylic copolymer emulsion

Properties

Typical Properties	Appearance	translucent emulsion
	Molecular weight (Mw)	> 200,000
	Non-volatile	39%
	Acid value	35 mg KOH/g
	pH	8.0
	Density at 25°C	1.04 g/cm ³
	Tg	<5°C

These typical values should not be interpreted as specifications.

Applications

Joncryl[®] HSL 9012 has specifically been developed for heat seal lacquers on push-through lidding foil for pharmaceutical blisters. Heat seal lacquers based on Joncryl HSL 9012 are suitable for hard- and soft-tempered aluminum push-through foils in all standard gauges, sealed against PVC, PVDC-coated PVC and PET. The product is not recommended for sealing against PE and PP blister materials.

Compared to solvent-based heat seal lacquers, Joncryl HSL 9012:

- Is cost effective
- Leaves no retained solvent
- Delivers comparable blister integrity

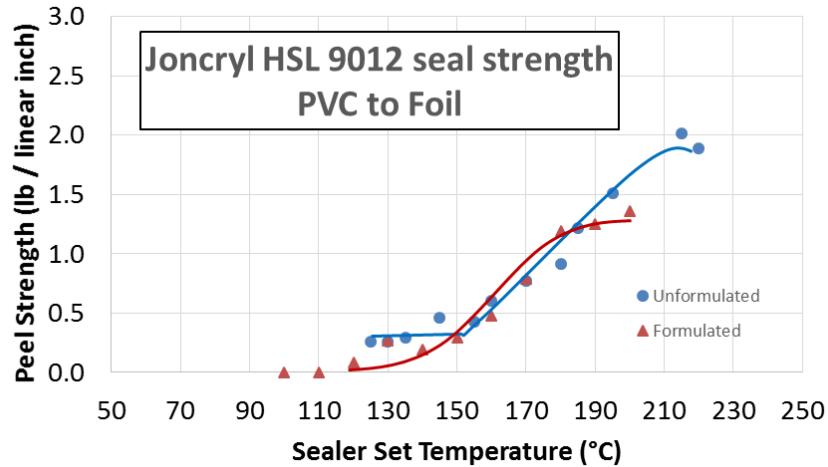
Formulation Guidelines	Joncryl [®] HSL 9012 should be blended with a defoamer and wax (dry or emulsified) for press stability and scratch resistance. It is also possible to blend in resin solution and/or fillers such as talc to optimize application properties and block resistance.
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Starting Point Formulation

93-94 parts	Joncryl® HSL 9012
3-5 parts	talcum
1-2 parts	Joncryl Wax 28
0.5 parts	Foamaster MO 2111

Application Guidelines

Heat seal lacquers based on Joncryl® HSL 9012 can be applied on standard converting machines; dilute with water to required application viscosity.
Recommended coating weight: 4-6 g/m², drying temperature 100-180°C.
Recommended sealing conditions: 160-220°C, >45 psi, 0.5-1.0 seconds



The plot above shows the bond strength at various sealing temperatures. The “Unformulated” curve shows Joncryl HSL 9012 applied neat, while the “Formulated” curve was generated with the starting point formula below. Coatings were applied with a wire wound bar to 2.5 mm O-temper aluminum foil and sealed to 1mm PVC sheet. The coated surfaces are sealed together at 1 bar/14.5 psi for 1 second. Results will vary with substrate thickness, seal pressure and seal time.

Safety

General

The usual safety precautions when handling chemicals must be observed. These include the measures described in Federal, State, and Local health and safety regulations, thorough ventilation of the workplace, good skin care, and wearing of protective goggles.

Safety Data Sheet

All safety information is provided in the Safety Data Sheet for Joncryl® HSL 9012.

Important

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