

# Industrial Coatings

## Technical Data Sheet



# Joncryl® 1907 and 1908

<b>Product Description</b>	Joncryl® 1907 and 1908 are acrylic emulsions for industrial waterborne clear wood primer and varnish applications
<b>Key Features &amp; Benefits</b>	<ul style="list-style-type: none"><li>- Pigment dispersing capability</li><li>- Excellent adhesion</li><li>- Fast dry</li><li>- Formulation versatility</li><li>- Unique rheology</li></ul>
<b>Chemical Composition</b>	Acrylic emulsions

	<b>Properties</b>		
	<u>1907</u>	<u>1908</u>	<u>1908</u>
<b>Typical Properties</b>	Appearance	translucent emulsion	opaque emulsion
	Non-volatile at 145°C	46% (60 minutes)	48% (40 minutes)
	pH at 25°C	8.3	8.3
	Viscosity at 25°C (Brookfield #2LV, 30 rpm, 30 seconds)	500 cps	500 cps
<b>Typical Characteristics</b>	<u>1907</u>	<u>1908</u>	<u>1908</u>
	Density	1.04 g/cm <sup>3</sup> (8.67 lbs/gal) (25°C)	1.04 g/cm <sup>3</sup> (8.72 lbs/gal) (20°C)
	MFFT	20°C	100°C
	Tg	21°C	98°C
Freeze-thaw stable	Yes	Yes	

These typical values should not be interpreted as specifications.

## Applications

Joncryl® 1907 and Joncryl® 1908 are acrylic emulsions designed as a blending system to give hardness, block resistance and allow for maximum latitude in the formulation of clear, pigmented and fast dry coatings for wood surfaces.

Joncryl® 1907 is a room temperature film forming polymer with good adhesion, flow, and water resistance. Joncryl® 1908 is a very hard polymer that imparts excellent block resistance properties.

Joncryl® 1907 and Joncryl® 1908 are recommended for applications such as:

- Interior waterborne wood coatings for millwork and joinery applications

## Formulation Guidelines

Because of its high pigment loading capacity, wide range of hardness, and good adhesion, the Joncryl® 1907 / Joncryl® 1908 system is recommended as a candidate for primers and basecoats for hardboard and plywood substrates.

Specific formulations for primers and basecoats will depend on the substrate, application method, desired resistance properties, and cost parameters.

The following general formulation guidelines are suggested:

- The pigment dispersion should be prepared in Joncryl® 1907 without additional dispersants; Joncryl® 1908 should be added in the letdown portion.
- The ratio of Joncryl® 1907 to Joncryl® 1908 will depend on the desired degree of block resistance. Levels of TiO<sub>2</sub> should be consistent with the desired hiding power and color of the coating, as well as raw material cost consideration.
- Extender pigments may be selected from the wide range of commercially available materials; combination of platy talc and amorphous silica are recommended for exterior applications.
- A pigment volume concentration (PVC) of 40% will give a good balance of adhesion, block resistance, and raw material cost (3:1 ratio of 1907:1908).

### Starting Point Formulation

The following starting point formulation for an air-dry clear varnish is recommended for an initial evaluation of Joncryl® 1907 and Joncryl® 1908. Additional optimization of the formulation may be required to achieve desired results for specific applications.

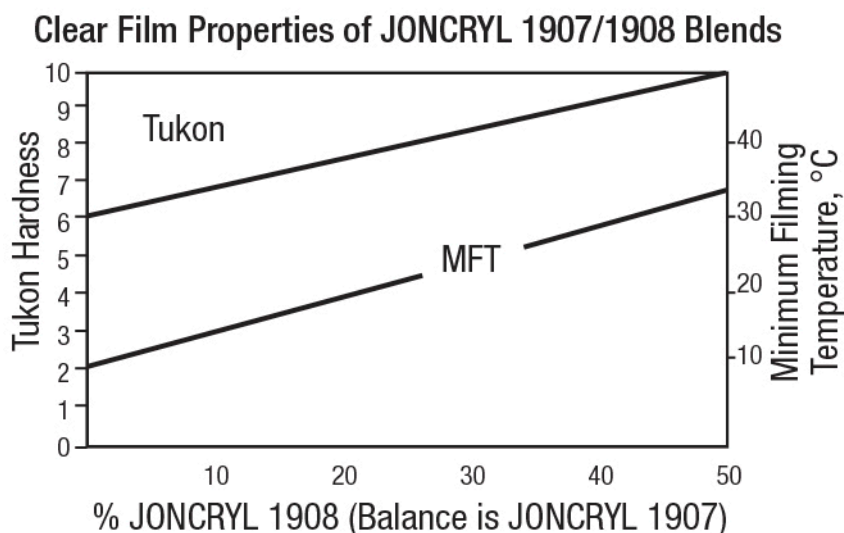
### Joncryl® 1907 and Joncryl® 1908, CLEAR VARNISH, Formula 364-A

<u>Materials</u>	<u>Pounds</u>	<u>Gallons</u>
Joncryl® 1907	586.3	67.63
Joncryl® 1908	195.5	22.55
Ethylene glycol mono butyl ether	30.9	4.11
Joncryl® Wax 26	38.8	4.73
Surfynol <sup>1</sup> 104-H	7.7	0.98
<b>Total</b>	<b>859.2</b>	<b>100.00</b>

### Formulation Attributes

Solids	44.1% by wt
pH	8.4
Viscosity (Brookfield)	300 cps
Density	8.59 lbs/gal

The Starting Point Formulation above is based on a combination of Joncryl® 1907 and Joncryl® 1908 in a weight ratio of 3:1 on solids. The dry film properties of the formulation can be altered by varying the ratio of Joncryl® 1907 and Joncryl® 1908 as shown in the graph below. Increasing amounts of Joncryl® 1908 will give a harder, more block-resistant film; this will increase the minimum filming temperature slightly and may require additional coalescing solvent to ensure good film formation. The use of slower evaporating solvents is recommended for coalescing purposes when using high levels of Joncryl® 1908 or in ambient dry situations where high humidity may be present.



<sup>1</sup>Registered trademark of Air Products and Chemicals, Inc.

## 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® 1907 and Joncryl® 1908.

## Important

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