UCAR™ n-Pentyl Propionate

The perfect replacement for EXXATE 600

The Same, But Better

If you are seeking a replacement for EXXATE 600, UCAR™ n-Pentyl Propionate is the perfect alternative. Why?

Nearly Identical Physical Properties

UCAR™ n-Pentyl Propionate and EXXATE 600 have nearly identical physical properties, because they are both esters and merely structural isomers of each other.

	UCAR n-Pentyl Proprionate	EXXATE 600
Molecular Weight	144	144
RER, nBuAc=1	0.2	0.17
VP, 20°C, mmHg	1.5	1.4
Density at 20°C, lb/gall	7.28	7.28
BP, °C at 760 mm Hg	165	162
Hansen Sol Parameters, $(J/cc^3)^{1/2}$		
Total	17.1	17.6
Non-polar	15.6	15.8
Polar	5.1	2.9
Hydrogen Bonding	5.1	5.9
Sol in Water, 20°C, %	<0.05	<0.03
Flash point, cc,°F	135	134

Lower Odor

If your application would benefit from a lower odor solvent, switching to UCAR™ n-Pentyl Propionate will enhance the value of your product. Comparison of odor threshold values shows that UCAR™ n-Pentyl Propionate is significantly lower in odor than EXXATE 600.

	Detection Threshold, ED_{50} in ppm	Recognition Threshold, ED_{50} in ppm
UCAR n-Pentyl Propionate	0.07	0.21
EXXATE 600	0.01	0.02

Note that the higher the threshold, the lower the odor.

Non-HAPS

UCAR™ n-Pentyl Propionate is not listed as a Hazardous Air Pollutant (HAP) under Title III of the Clean Air Act.

Linear Structure

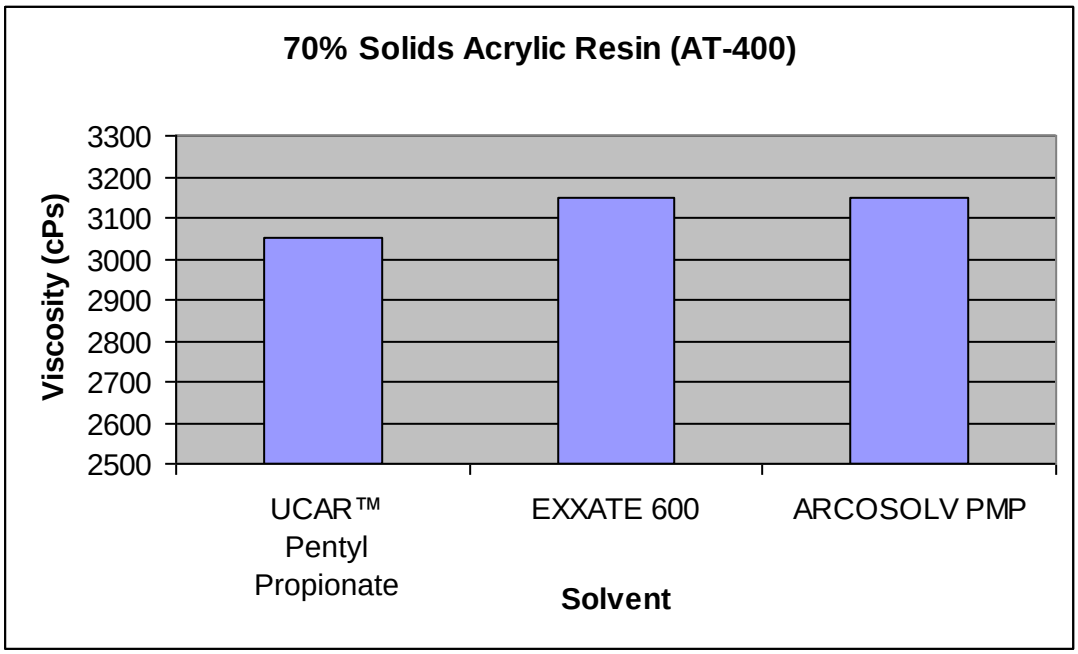
EXXATE 600 is a mixture of branched six carbon acetate esters. Solvents with a linear structure, such as UCAR™ n-Pentyl Propionate, have enhanced diffusion during film formation, resulting in improved surface appearance.

High Electrical Resistivity

High electrical resistivity is useful in adjusting the conductivity of formulations for electrostatic applications. UCAR™ n-Pentyl Propionate has an electrical resistivity of >1,000 Megaohms.

Excellent Solvency

The strong solvency of UCAR™ n-Pentyl Propionate results in excellent viscosity reduction, high solids formulations and lower VOC content.



Superior in Acrylic Polymerizations

The high boiling point of UCAR™ n-Pentyl Propionate makes it an excellent polymerization solvent for acrylic resins. Our experiments have shown that UCAR™ n-Pentyl Propionate has the following advantages in this application over EXXATE 600:

- slightly lower viscosity
- lower molecular weight and narrower molecular weight distribution

Regulatory Listings

UCAR™ n-Pentyl Propionate is listed on the following: TSCA (USA), Australia, DSL (Canada), China, EINECS (Europe), ENCS (Japan), Korea, PICCA (Philippines).

US/Canada Product Info: 1-800-447-4369
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