

FluorAcryl 7298

Introduction. FluorAcryl 7298 is a perfluoropolyether (PFPE) used as an additive in other UV curable coatings to reduce surface tension and improve water, oil and stain resistance. Films and coatings with 7298 may be expected to provide anti-fouling and easy cleaning from fingerprints and other contaminants. FluorAcryl 7298 is compatible with many monomers, such as TMPTA. With or without pigments and other particulates, 7298 rapidly UV cures in the presence or absence of oxygen.

Unlike other fluorinated additives, 7298 will not mechanically weaken or reduce chemical resistance of the final polymer matrix, rather strengthening it and decreasing solvent penetration. For example, 7298 is exceptional at 1.5% of total solids in high functionality UV curable urethane acrylates (e.g. 6-functional UAs). While 7298 is soluble in fluorinated solvents, it is also completely soluble in many organic solvents, such as ethyl acetate, butyl acetate, MEK and PGMEA. FluorAcryl 7298 is provided without solvents.

Application Methods. FluorAcryl 7298 as a component in other coatings may be applied via direct or reverse roll, offset gravure, metering rod, slot die, knife over roll, air knife, curtain, dipping, spraying, screen printing and spin coating methods. FluorAcryl 7298 is a surface modification agent.

Summary data for 7298. The data below describes general properties for 7298.

<p>Functionality: Hexa-functional acrylic and perfluoropolyether Viscosity (at 25°C): 42,460 cP Liquid RI: 1.47 Odor: Light acrylic odor Flammable: No Solvents: None Solvent solubility: Soluble in acetone, butyl-acetate, ethyl-acetate, etc. Water soluble: No Color: Clear to lightly turbid</p>
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Summary data for 7298 in TMPTA. The data below illustrates the properties for 25 µm films of 2% 7298 (w/w) in a TMPTA based coating, UV-cured in air with 5% photoinitiator MicroCure CTO-46.

<p>Surface Energy: 13 to 15 dyne/cm² Refractive index: ~1.47 Contact angles to DI water: >100° Roll off angle to DI water: < 8° Contact angle to mineral oil: ~65° degrees Roll off angle to mineral oil: 3° MEK resistance: >200 double rubs Magic marker resistance: beads up, easily removed Pencil hardness: >2H</p>
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25 microliters of mineral oil on SR399 UV-curable coating compared to SR399 plus 2% FluorAcryl 7298



25 microliters of clover oil on a UV-cured film of CN9302 and SR351 (50:50) compared to CN9302 and SR351 (50:50) plus 2% FluorAcryl 7298

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