



MODULAST™ PUR Product Description

MODULAST PUR is a **newly developed, high purity modifier** designed primarily for use in reactive polyurethane systems, featuring the **lowest residual hydroxyl levels available on the market**. MODULAST PUR aids the polyurethane formulator by coupling unexpected properties—softness and strength—while providing exceptional compatibility and very low color development and odor.

While MODULAST PUR helps impart softness to polyurethanes, it does so with less efficiency than traditional dibenzoates such as MODULAST CLS. Combined with its high compatibility, this means that MODULAST PUR can be utilized at higher loading levels to achieve equal softness, providing the opportunity to optimize the overall cost of a polyurethane formulation.

Specifications

Acidity, as benzoic acid, maximum, %.....	0.1
Assay, as benzoate ester, minimum, %.....	98.0
Color, APHA, maximum	50
Hydroxyl number, maximum, mg KOH/g	2
Moisture content, maximum, %.....	0.07

Typical Properties

Assay, as benzoate ester, %.....	>98
Acidity, as benzoic acid, %.....	0.03
Boiling point, 5 mmHg, °C	205
Boiling point, 760 mmHg (extrapolated), °C.....	343
Color, APHA.....	50
Density, ASTM D1475, 25°C, lbs/gal	9.6
Flash point, ASTM D92, °C.....	215
Freeze point, °C	<-20
Glass point, by DSC, °C.....	-51
Hydroxyl number, mg KOH/g	1.8
Moisture content, %	0.03
Refractive index, 25°C	1.54
Solubility, in water, %	0.3
Solubility, water in, %	0.1
Solubility parameter, Small's, Hildebrands	9.8
Specific gravity (density, g/mL), 25/25°C	1.15
Surface tension, ASTM D1331, 25°C, dynes/cm	35
Vapor pressure, 25°C (extrapolated), mmHg.....	1.1 x 10 ⁻⁶
Viscosity, Brookfield RVT, 20 RPMs at 25°C, cPs and mPa·s	94
VOC, ASTM D2369, %.....	0.9

Regulatory Information

FDA CFR Listings

- **21 CFR 175.105** – Adhesives (PART 175 – INDIRECT FOOD ADDITIVES: ADHESIVES AND COMPONENTS OF COATINGS, Subpart B – Substances for Use Only as Components of Adhesives).

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Kalama® VITROFLEX®, K-FLEX®, and MODULAST™ products are included on or exempted from many global inventories. Please reference the product safety data sheet (SDS) for current global inventory status and other regulatory information. Current SDS's can be found on our website at www.emeraldkalama.com or can be requested from product.compliance@emeraldmaterials.com.

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