

## Kalama<sup>®</sup> VITROFLEX<sup>®</sup> A90 Product Description

Kalama VITROFLEX A90 is a new grade of benzoate plasticizer designed primarily for use in 2K insulating glass polysulfide sealants. Kalama VITROFLEX A90 has excellent compatibility with polysulfide polymers and low volatility, making it an optimal choice for the A-side plasticizer.

## Specifications

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Acidity, as benzoic acid, maximum, % .....	0.1
Assay, as benzoate ester, minimum, % .....	98
Color, APHA, maximum .....	100
Hydroxyl number, maximum, mg KOH/g .....	15
Moisture content, maximum, % .....	0.2
Specific gravity, 20°C .....	1.167–1.175
Refractive index, 20°C .....	1.539–1.545
Viscosity, Brookfield RVT, 50 RPMs at 20°C, cps .....	80–120

## Typical Properties

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Assay, as benzoate ester, % .....	98.7
Acidity, as benzoic acid, % .....	0.06
Boiling point, 5 mmHg, °C .....	176
Color, APHA .....	22
Freeze point, °C .....	20
Hydroxyl number, mg KOH/g .....	8
Moisture content, % .....	0.04
Refractive index, 25°C .....	1.54
Specific gravity, 25/25°C .....	1.17
VOC, ASTM D2369, % .....	0.7

## Regulatory Information

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### FDA Coverage:

- 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)
- 21 CFR 176.170 – Components of paper and paperboard in contact with aqueous and fatty foods
- 21 CFR 176.180 – Components of paper and paperboard in contact with dry food

### Global Inventories:

Kalama® VITROFLEX® and K-FLEX® plasticizers 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](http://www.emeraldkalama.com) or can be requested from [product.compliance@emeraldmaterials.com](mailto:product.compliance@emeraldmaterials.com).

## Contact Us

### Europe, Middle East, or Africa

Rotterdam, The Netherlands

+31 88-888-0500

[kflex.emea@emeraldmaterials.com](mailto:kflex.emea@emeraldmaterials.com)

### Americas

Vancouver, WA, USA

+1 360-954-7100

[kflex@emeraldmaterials.com](mailto:kflex@emeraldmaterials.com)

### Asia Pacific

Hong Kong

+ 852 2598-7990

[kflex.asia@emeraldmaterials.com](mailto:kflex.asia@emeraldmaterials.com)

*Emerald Kalama Chemical is a world-scale producer of a variety of benzoic acid, benzaldehyde, and derivatives, with production facilities in the U.S. and Europe. Products include benzoic acid, various benzoate and dibenzoate ester, alcohol and aldehyde derivatives for food and personal care preservatives, flavor and fragrance ingredients, plasticizers and industrial applications. Emerald Kalama Chemical is a division of Emerald Performance Materials, a manufacturer of additives and polymers that make products last longer, look, taste, smell, or perform better. The company has two business units, six operations and approximately 700 employees. For more information, please contact us.*

### Global service through our Regional Distribution Partners

[www.emeraldkalama.com](http://www.emeraldkalama.com)

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