



ELACTAVIA - CAF™ (Caffeine)

Technical Datasheet

1. Technical Datasheet

Property	Specification
Physical Properties	
Appearance	White crystalline powder
Physical Form	Powder
Odor	Odorless
Molecular Weight	194.19 g/mol
Density / Specific Gravity	1.23 g/cm ³
pH (1% aqueous solution)	6.9
Assay / Purity	98.5 - 101.0% (on an anhydrous basis)
Chemical Properties	
pKa	~0.6
Ionic Nature	Weakly basic
Incompatibilities	Strong oxidizing agents, strong acids, and strong bases.
Hazardous Reactions / Decomposition Products	Nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.
Thermal Properties	
Melting Point	235-238 °C
Boiling Point	178 °C at 760 mmHg (sublimes)
Flash Point	Not applicable
Decomposition Temperature	Decomposes before reaching its boiling point.
Thermal Stability	Stable for years under proper storage conditions. Heat above 178°C causes sublimation.
Solubility	
Solubility in Water	~2 g / 100 mL at 25°C; 18 g / 100 mL at 80°C
Solubility in Ethanol	Moderately soluble (1.5 g/100 mL)
Solubility in Methanol	Soluble
Solubility in Acetone	Slightly soluble



Property	Specification
Solubility in Diethyl Ether	Very slightly dissolved
Solubility in Chloroform	Freely soluble

2. Dosing by Application

Application	Recommended / Max Dosage
Stimulant in Beverages	For most healthy adults, up to 400 milligrams (mg) per day is considered safe. This is equivalent to about four 8-ounce cups of brewed coffee.
Personal Care Products (Topical) - Under-eye creams and serums	1-3%
Personal Care Products (Topical) - Body / cellulite creams	1-5%
Personal Care Products (Topical) - Face products for puffiness	1-2%
Personal Care Products (Topical) - Hair scalp serums	0.5-1%
Dietary Supplements	Up to 400 mg per day is considered safe for most adults.
Food Additive (e.g., Carbonated Beverages)	The FDA has cited that less than 200 ppm (<0.02%) of caffeine is authorized for use in carbonated beverages.

The information and data contained herein are believed to be accurate but may not be all inclusive and should only be used as a guide. The information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the product for his particular use and on condition that they assume the risk of the use thereof.

EXPLORE ELCHEMY'S PRODUCT PORTFOLIO

[ELACTAVIA - CAF™ \(Caffeine\)](#) | [Browse Catalog](#) | [Connect with us](#)