



Technical Data Sheet

VERSENE™ 220 Crystals Chelating Agent

Product Availability

- North America
- Europe
- Latin America
- Pacific
- India
- Middle East and Africa

Applications

- Cleaning products
- Metalworking
- Polymerization
- Personal care products

Typical Properties¹

Specification Writers: These values are not intended for use in preparing specifications.

Property	Unit	Result
Calcium Chelation Value		229 mg as CaCO ₃ per gram of VERSENE™ 220 Crystals
Equivalent Chelation Capacity		One gram of VERSENE™ 220 Crystals has the equivalent chelation capacity of 2.19 mmoles of EDTA
Metal Chelation Capacity	Parts chelant per part metal (w/w)	
Ca		11.7
Mg		19.2
Fe		8.3
Cu		7.4
Mn		8.5
% Assay		99.0 wt% as Na ₄ EDTA • 4H ₂ O 83.2 wt% as Na ₄ EDTA 64.0 wt% as H ₄ EDTA
Appearance		Solid, white, crystalline
Bulk Density	kg/m ³ (lb/cu ft)	720 (45)
Color		200 maximum (30% aqueous solution) (APHA)
pH		10.5–11.5 (1 wt% solution)
Water Solubility	wt% at 25°C/77°F	50.7

1. The data provided for these properties are typical values, intended only as guides, and should not be construed as sales specifications.

Active Ingredient Name	Tetrasodium ethylenediaminetetraacetate tetrahydrate
CAS Number	13235-36-4 For TSCA and EINECS purposes, reference CAS No. 64-02-8 for anhydrous Na ₄ EDTA.
Chemical Formula	C ₁₀ H ₁₂ N ₂ O ₈ Na ₄ • 4H ₂ O or (NaOOCCH ₂) ₂ NCH ₂ CH ₂ N(CH ₂ COONa) ₂ • 4H ₂ O
Chemical Structure	
Molecular Weight	452.2
Other Names	Na ₄ EDTA • 4H ₂ O, Tetrasodium EDTA
Description	This is a dry, crystalline version of VERSENE™ 100 Chelating Agent. It is useful in formulating dry products or where the total water content of a product must be kept to a minimum. It also offers freight savings over VERSENE™ 100 Chelating Agent. Because VERSENE™ 220 Crystals is a crystallized product, it contains less impurities than VERSENE™ 100 Chelating Agent.
Handling Precautions	PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW WEBSITE AT DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.
Limitations	This product is neither tested nor represented as suitable for medical or pharmaceutical uses.
Health and Environmental Information	<p>To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.</p> <p>For further information, please see our website, dow.com or consult your local Dow representative.</p>

Disposal Considerations

Dispose in accordance with all local, state (provincial) and federal regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.

It is the user's responsibility to verify that treatment and disposal procedures comply with local, state (provincial) and federal regulations. Contact your Dow Technical Representative for more information.

Product Stewardship

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

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