



VERSENE Na₂ Crystals Chelating Agent

Product Name	VERSENE* Na ₂ Crystals chelating agent
Product Availability	North America, Latin America, Pacific, Europe, India, Middle East, and Africa
Applications	cleaning products, oilfield applications, personal care products
Active Ingredient Name	Disodium ethylenediaminetetraacetate dihydrate
CAS Number	6381-92-6 For TSCA purposes, reference CAS No. 139-33-3 for anhydrous Na ₂ EDTA
Chemical Formula	C ₁₀ H ₁₄ N ₂ O ₈ Na ₂ · 2H ₂ O or (NaOOCCH ₂)(HOOCCH ₂)NCH ₂ CH ₂ N(CH ₂ COOH) (CH ₂ COONa) · 2H ₂ O
Chemical Structure	$\left[\begin{array}{ccc} \text{HOOCCH}_2 & \diagdown & \text{NCH}_2\text{CH}_2\text{N} & \diagup & \text{CH}_2\text{COONa} \\ & & & & \\ \text{NaOOCCH}_2 & \diagup & & \diagdown & \text{CH}_2\text{COOH} \end{array} \right] 2\text{H}_2\text{O}$
Molecular Weight	372.2
Other Names	Na ₂ H ₂ EDTA·2H ₂ O, Disodium EDTA
Description	This is a partially neutralized salt of EDTA, in dry form. VERSENE Na ₂ Crystals chelating agents are well suited for applications calling for neutral pH or mildly acidic conditions, such as personal care products. Because it is a crystallized product, VERSENE Na ₂ Crystals contain less impurities than VERSENE 100. It is useful in formulating dry products or where the total water content of a product must be kept to a minimum.

Typical Properties†

Calcium Chelation Value	267 mg as CaCO ₃ per gram of VERSENE Na ₂ Crystals
Equivalent Chelation Capacity	One gram of VERSENE Na ₂ Crystals has the equivalent chelation capacity of 2.69 mmoles of EDTA
Metal Chelation Capacity	Parts chelant per part metal (w/w)
Ca	9.9
Mg	16.3
Fe	7.1
Cu	6.2
Mn	7.2
% Assay	99.0 wt% as Na ₂ H ₂ EDTA•2H ₂ O 89.4 wt% as Na ₂ H ₂ EDTA 77.7 wt% as H ₄ EDTA
Appearance	White to off-white powder
Bulk Density	977 kg/m ³ or 61 lb/cu ft
pH	4.3-4.7 (1 wt% solution) 4.0-6.0 (5 wt% solution)
Freezing Point	200°C/ 392°F
Water Solubility	5-7 wt% at 25°C/77°F

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

For more information, complete literature, and product samples, you can reach a Dow representative at the following numbers:

United States call 1-800-447-4369
and Canada fax 1-989-832-1465

From Mexico call 95-800-447-4369
fax 95-989-832-1465

In Europe toll-free+800.3694.6367
call +31/20.691.6268
fax +31/20.691.6418

Or you can contact us on the Internet at
www.versene.com

Notice: No freedom from any patent owned by Seller or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other governmental enactments. Seller assumes no obligation or liability for the information in this document. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.

Published June 2002

