



NUMBER 4925-2 (Supersedes 4925-1)

Aqualon™ cellulose gum (CMC)

Aqualon cellulose gum (CMC, carboxymethylcellulose sodium) is the sodium salt of carboxymethylcellulose (CMC) that has been produced to meet the purity specifications set by the European Union (EU), the Food and Agricultural Organization/World Health Organization (FAO/WHO) and the US Food Chemicals Codex. It is available in three basic viscosity ranges from 50 mPa·s (cP) in a 4% solution to 4500 mPa·s (cP) in a 1% solution. Examples of the viscosities of some grades are shown below; however, additional types are available or can be manufactured to meet the demanding needs of our customers.

Types and Typical Properties

Degree of substitution

Aqualon CMC is produced in three degrees of substitution (DS) which are listed below. Higher degrees of substitution impact the rheology of the aqueous solution and give improved compatibility with other solutes in the system.

DS Type	Substitution range	Sulfated ash, % ^(b)	Sodium content, % ^(b)
7	0.65–0.90 ^(a)	21.6–27.3	7.0–8.8
9	0.80–0.95	25.1–28.3	8.1–9.2
12	1.15–1.45	32.1–37.0	10.4–12.0

Typical viscosity ranges

This table shows selected viscosity levels. Not all materials are available in all particle sizes. For additional information or special requests, please contact your local sales representative.

DS type 7	DS type 9	DS type 12	Concentration	Range at 25°C, mPa·s
High				
7H4F	9H4F		1	2500–6000
7H3SF			1	1000–2800
7HOF			1	1000–2800
7HF			1	1500–3000
Medium				
		12M31P	2	800–3100
	9M31F		2	1500–3100
7MF PH	9M8F	12M8	2	400–800
7M8SF			2	200–800
7M2F			2	100–200
Low				
7LF			2	25–50
7L2P			4	50–200

Particle size distributions of Aqualon CMC

Aqualon CMC is available with different particle size distributions to meet various production and end use needs. The typical particle size distributions available are listed in the table below.

Designation	Description	Particle size (microns by Malvern laser diffraction method)
-	regular	D(0.5): 0–250
C	coarse	D(0.5): 430–900
X	fine	D(0.5): ≤70 D(0.9): ≤140

Specifications of Aqualon CMC

Specification	Limit
Purity, CMC content on dry basis, %	99.5 min
NaCl + Na glycolate, %	0.5 max (12-types only)
Loss on drying, as packaged, %	10 max

Regulatory Status

An ADI (acceptable daily intake) of "not specified" has been allocated to cellulose gum by the Scientific Committee for Food of the Commission of the European Union, and by the Joint FAO/WHO Expert Committee on Food Additives. The European Commission has also assigned to CMC the number E-466 to designate its food approval status in the Community. Aqualon CMC, produced in Hopewell, VA, USA, complies with the EU food purity criteria. This facility complies with Current Good Manufacturing Practices (cGMPs) as specified in 21 C.F.R. Part 110.

Packaging and Storage

The standard package is a 50 lb bag supplied on pallets of 40 bags each. The packaging is selected to avoid ingress of moisture, but the water content of the packed product may increase if not stored dry. Aqualon CMC is a non-

perishable powder. It is recommended to use the product in rotation on a first-in first-out basis. The product should be stored in its original packing under dry and clean conditions and away from heat. The product is hygroscopic.

Product Safety

Read and understand the Safety Data Sheet (SDS) before using this product.

Chemical Substances Information

CTFA/INCI Name : Cellulose gum
CAS Number : 9004-32-4
CAS Name : Cellulose, Carboxymethyl ether, Sodium Salt