

INTRODUCTION

AEROTEX NMA 48%, offered as a 48% aqueous solution, is a bifunctional monomer possessing both vinyl and hydroxymethyl groups. Thermoplastic polymers can be formed through the copolymerization of NMA with a variety of vinyl monomers via emulsion, solution, or suspension techniques. The resulting products, having pendant hydroxymethyl groups, are self-crosslinkable under moderate conditions. This mechanism permits the conversion of thermoplastic backbone polymers to thermoset materials at the point of use without the need for an external crosslinker. Conversely, the hydroxymethyl group can first be reacted with a substrate like cellulose and subsequently cross-linked by free radical polymerization.

APPLICATION AREAS

The applications of AEROTEX NMA 48% range from adhesives and binders in papermaking, textiles, and non-wovens to a variety of surface coatings and resins for varnishes, films and sizing agents.

TYPICAL PHYSICAL PROPERTIES

Property	Range	Method
Appearance	Clear to slightly hazy	Visual
Color, APHA (Pt-Co Units)	10 max	DIN EN ISO 6271
Total Solids by Bromination, wt %	46.0 – 50.0	NMA-1
NMA Content, wt%	40.0 – 44.0	NMA-4
Free formaldehyde, wt %	< 2.0	NMA-7
Copper Content, ppm	0.5 – 2.0	NMA-3
MEHQ inhibitor, ppm	25 – 35	NMA-6
pH	5.5 - 7.0	NMA-2
Additional Information		
Specific Gravity at 25°C	1.08 g/ml	
Heat of polymerization	20k cal/mole	
Crystallization point	-10°C	
Homopolymer Tg	34°C	

STABILITY AND STORAGE

AEROTEX NMA 48% is highly reactive, thus, it is essential that precautions be taken to maintain stability during shipping and storage. The stability of the solution is dependent mainly upon oxygen level, contaminants, storage temperature, and pH.

AEROTEX NMA 48% has a shelf life of 180 days from the date of manufacture and should be stored in a cool place where the temperature range is between 0°C and 29°C.

SAFETY AND HANDLING

Before using AEROTEX NMA 48%, consult the Material Safety Data Sheet for additional information on hazards, handling procedures, and recommended protective equipment.