

Broad Spectrum Antimicrobials - Solid Systems

	NNXC AB Silica and Silver		NNXC ZB Zeolite and Silver		NNXC AZ PZT, Silica and Silver	
Characterization	NNXC AB is an inorganic antimicrobial powder that inhibits the growth of Gram-positive, Gram-negative bacteria and mold. The product can be added in plastics, synthetic fibers, elastomers and engineering polymers, coatings, varnish and inks. The product can be processed at temperatures up to 600oC.		NNXC ZB is an inorganic antimicrobial powder that inhibits the growth of Gram-positive, Gram-negative bacteria and mold. The product can be added in plastics, synthetic fibers, elastomers, engineering polymers, coatings, varnish and inks. The product can be processed at temperatures up to 600oC.		NNXC AZ is na hybrid antimicrobial powder that inhibits the growth of fungi ad mold. The product can be added in plastics, synthetic fibers, green house films and wood plactis compounds.	
Composition	Component	CAS Number	Component	CAS Number	Component	CAS Number
	Silica	112926-00-8	Zeolita	112926-00-8	Silica	112926-00-8
	Silver	7440-22-4	Silver	7440-22-4	Silver	7440-22-4
					bis(2-pyridylthio)zinc 1,1'-dioxide	13463-41-7
Properties	Particle size, d50	17 µm	Particle size, d50	5 µm	Melting Point	240 °C
	N2 surface area	400 m ² /g	Appearance	Grayish fine powder	pH (5% sol in distilled H₂O)	6.5 - 8.5
	Appearance	White fine powder			Appearance	White to yellowish fine powder
					Solubility in Water	Insoluble
Applications	Commodity Thermoplastics Engineering Thermoplastics High-temperature Resistant Thermoplastics Thermoplastic Elastomers Elastomers Thermosets		Commodity Thermoplastics Engineering Thermoplastics High-temperature Resistant Thermoplastics Thermoplastic Elastomers Elastomers Thermosets		Commodity Thermoplastics Engineering Thermoplastics High-temperature Resistant Thermoplastics Thermosets	
Features benefits	Good compatibility and stability in processes Supports high temperatures Very few color changes and transparency Can be combined with other additives No Inhibition Halo Formation No migration FDA and EPA Approved for direct food contact and other applications Mercosur regulation for food packaging Long lasting		Good compatibility and stability in processes Supports high temperatures Can be combined with other additives No Inhibition Halo Formation No migration Mercosur regulation for food packaging Small size for filament processes Long lasting		Good compatibility and stability in processes Supports good temperatures Can be combined with other additives Inhibition Halo Formation Broad spectrum of performance, Bactericide, Fungicide Good performance in low concentration Long lasting	

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	NNXC AT		NNXC ATZ	
	Triclosan, Silica and Silver		PZT, Triclosan, Silica and Silver	
Characterization	NNXC AT is an antimicrobial powder that inhibits the growth of Gram-positive, Gram-negative bacteria and mold. The product can be added in plastics, synthetic fibers and wood plastic compounds.		NNXC ATZ is an antimicrobial powder that inhibits the growth of Gram-positive, Gram-negative bacteria and mold. The product can be added in plastics, synthetic fibers and wood plastic compounds.	
Composition	Component	CAS Number	Component	CAS Number
	Silica	112926-00-8	Silica	112926-00-8
	Silver	7440-22-4	Silver	7440-22-4
	5-chloro-2-(2,4-dichlorophenoxy)phenol	3380-34-5	bis(2-pyridylthio)zinc 1,1'-dioxide	13463-41-7
			5-chloro-2-(2,4-dichlorophenoxy)phenol	3380-34-5
Properties	Melting Point	56 °C	Melting Point	56 °C
	pH (5% sol in distilled H₂O)	6.5 - 8.5	pH (5% sol in distilled H₂O)	6.5 - 8.5
	Appearance	White to yellowish fine powder	Appearance	White to yellowish fine powder
	Solubility in Water	Insoluble	Solubility in Water	Insoluble
	Solubility	PEG and alcohol	Solubility	PEG and alcohol
Applications	Commodity Thermoplastics Engineering Thermoplastics Thermoplastic Elastomers Elastomers		Commodity Thermoplastics Engineering Thermoplastics Thermoplastic Elastomers	
Features benefits	Good compatibility Great Inhibition Halo Formation Broad spectrum of performance, Bactericide, Fungicide Good performance in low concentration Long lasting		Good compatibility Supports good temperatures Great Inhibition Halo Formation Broad spectrum of performance, Bactericide, Fungicide Good performance in low concentration Long lasting	

