



## Technical Datasheet

### Product: Antimicrobial Polyethylene Masterbatch

### Grade: C1PE-AMM4

#### Product Description:

C1PE-AMM4 is an antimicrobial polyethylene masterbatch using nanotechnology. C1PE-AMM4 creates a good balance between antibacterial, antifungal and anti-algae properties in polyethylene. This product also prevents the formation of biofilms on the wall of the product by creating a super hydrophobic property in polyethylene.

#### Applications:

- Geomembranes.
- Pipes and fittings.
- Wood plastics.
- Water storage tanks.
- Generally, polyethylene parts that are directly exposed to water and light.

#### Appearance:

Host Polymer	PE
Appearance	Granules
Color	Natural
Dispersion	Excellent

#### Physical Properties:

Properties	Unit	Value	Standard
Melt Flow Index (190°C , 2.16 Kg)	g/10min	4	ASTM D1238
Specific Gravity	g/cm <sup>3</sup>	0.94	ASTM D792

#### Antimicrobial Properties:

Properties	Type of Microorganism	R (Antimicrobial Activity)*	Standard
Antibacterial Performance	E.coli (ATCC : 25922)	2<	Iso 22196
Antibacterial Performance	S.aureus (ATCC : 25923)	2<	Iso 22196
Antifungal Performance	C.albicans (ATCC : 10231)	2<	Iso 22196

\* Antimicrobial activity above 2 is desirable.

**Dosage:** Using very low percentages of these materials (between 4-5% by weight) in the process of the plastic will result in the creation of genuine and complete antimicrobial components and structures.

**Note:** The information provided in this data sheet is based on our present state of knowledge and is estimated by Payesh C1 Polymer Co. This information should not be used as guaranteeing specification limits. Payesh C1 Polymer Co. make no warranty and liability in connection with any use of this information.