Symphony environmental

A British Public Company

d2p

“Designed to Protect”

Providing anti-microbial protection

d2p - Inside Adding Value

January 2010

Product No: 96 410
Tariff No: 3824 9097

Product description

d_2p is an additive system that gives plastic products anti-microbial and fungicidal performance.

d_2p is a masterbatch designed for specific applications. The inorganic nature, small particle-size and high temperature-tolerance of the active ingredient makes it ideal for use in a wide range of polymer processes.

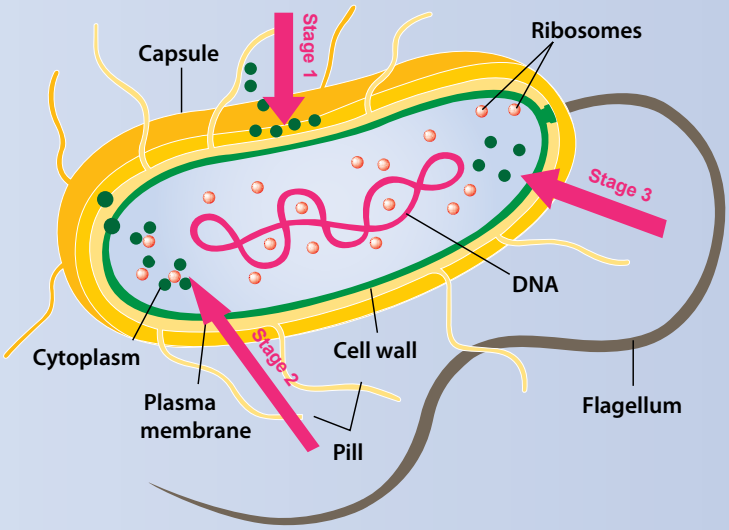
How does it work?…Silver based biocide

Silver is widely accepted as having broad-spectrum anti-microbial activity. In order to understand why this is so, it is necessary to examine the action of silver ions against microbes.

Stage 1: Silver ions enter micro-organism's membrane and cause damage and disruption to the cellular wall before penetrating the cell.

Stage 2: Silver ions are highly reactive with enzymes and can deactivate vital molecules.

Stage 3: Silver ions interact with the DNA cell and prevent replication.



Technical information

General:

d_2p contains a sparingly-soluble silver-containing salt which provides a slow release of silver ions, safely inhibiting bacterial and fungal growth.

The slow release of the silver active-ingredient gives long-term protection.

If used with d_2w, the oxidation phase will work but not the biodegradation.

Temperature:

d_2p additives can be processed at temperatures up to 600˚C without losing their anti-bacterial properties.

Physical Properties:

Appearance:	white pellets
Particle-size and shape:	2-3 mm cylindrical
Solubility:	Essentially insoluble

Recommended Addition Rates:

The recommended rate for d_2p is between 1% and 2% depending on applications and conditions.

Storage:

Whilst d_2p additives have been formulated for maximum stability in storage and in use it should be understood that silver-containing materials do exhibit varying degrees of light-sensitivity and can cause discoloration in the finished article.

The producer of products containing d_2p should evaluate them under their normal conditions of use.

d_2p Anti-microbial in polymers

d_2p additive has been successfully incorporated into the following polymers:

- PE
- PVC
- PS
- PET
- PP

d_2p a successful protection against micro-organisms

d_2p is effective against Gram-positive bacteria, Gram-negative bacteria, mold and yeast.

Key benefits of using d_2p - **Designed to Protect** against:

- Cross contamination
- Healthcare and food industry infections
- Staining
- Discoloration
- Odour development

Symphony Environmental
"World-leaders in advanced plastic technology"

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