FRESHNESS PLUS ADDITIVE

Q.1) What is the composition of Freshness Plus Additive?

- **Freshness Plus Additive** is composed of inert inorganic nano-spheres, pico particles of silver or polymeric nano-spheres.

Q.2) What is the Mechanism of Action?

- Vegetables, fruits and meat emit ethylene gas during storage due to ripening. Ethylene is a catalyst for ripening process causing accelerated ripening. This leads to a chain reaction thus reducing the shelf-life of the above products. If ethylene concentration is kept below threshold level of 10 ppb, the ripening of these products gets retarded by almost 50%.
- **Only silver acts as a catalyst in converting ethylene to ethylene oxide.**
  Ethylene oxide is a known biocide, fungicide and algaecide, which is effective even at a low concentration and is food safe at that level. (LD 50 oral, rat 72 mg/kg , Inhalation human 12,500 ppm / 10 sec.)

Q.3) How is Freshness Plus Additive superior to others?

- **Freshness Plus Additive** performs a dual job –
  a) Retarding of ripening of fruits and vegetables by destroying ethylene.
  b) Slowing down rotting of fruits, vegetables and meat due to ethylene oxide
  c) Being a catalytic material, is not consumed.

Q.4) Method of Use

- The recommended dosage of Freshness Plus Additive is **10%** for master batch in LLDPE, PS, PBT & other polymers.
- The recommended dosage of this master batch in polymers is **1-2%.**

Q.5) Can Additive addition in the product change its basic properties?

- It will not change the basic properties of the product.
- Slight haze may be observed in transparent plastics at higher level of use.
- Mechanical properties are not significantly affected at such low levels of fillers/ carrier

Q.6) What is the shelf life of Freshness Plus Additive?

- Freshness Plus Additive has two years of shelf life from the date of manufacture under dray condition of storage at R.T.