

## KANAMOLL : EPOXIDIZED SOYABEAN OIL

ESBO is a vegetable oil-based light coloured secondary plasticizer. ESBO is manufactured from soybean oil through the process of epoxidation. It is been used widely as plasticizer because of high numbers of epoxidized carbon-carbon double bonds. The epoxide group is more reactive due to double bonds, thus making it a good hydrochloric acid scavenger and plasticizer.

### Why **Kanamoll** is important in the general formulations?

**Kanamoll** is used as a co-plasticizer, as an acid scavenger in soft PVC process for hydrochloric acid liberated from PVC when PVC undergoes heat treatment and acts as a mercaptan/acid scavenger in many other applications, as well as a secondary heat and light stabilizer. Due to low cost non-toxic and environmentally friendly properties, as well as biodegradability over traditional plasticizers partially replacing DOP (DI OCTYL PHTHALATE) in PVC applications.

### Specifications

Parameters	<b>Kanamoll-620</b>	<b>Kanamoll -650</b>
Appearance	Clear Liquid	Clear Liquid
Colour	Pale Yellow	Pale Yellow
Specific Gravity @ 27° C	0.998 ± 0.002	0.998 ± 0.002
Viscosity, Ford Cup B4 @ 27° C	130 sec ± 5 sec	130 sec ± 5 sec
Oxirane Oxygen	6.2% ± 0.1	6.5% ± 0.1
Acid Value mgm NaOH/gm	1.0 ± 0.1	0.8 ± 0.1
Iodine Value gm/100gm	5max	3max
Moisture + Volatiles	0.1max	0.1max
Volatile Loss (%) at 130° C for 3 hrs	0.2max	0.2max
Stability at 150°C for 2 hrs	Pale Yellow	Pale Yellow
Refractive Index@ 27° C	1.470-1.475	1.470-1.475

## Applications

- Flexible PVC formulations
- As a co-stabilizing internal lubricant in Rigid PVC formulations
- Soya based inks
- Pesticides
- Insecticides
- As pigment dispersion agent
- As chemical intermediate
- Lubricants
- Cutting oils
- As an epoxy reactive diluent
- Functional fluids
- Fuel additives
- As a polyol replacement
- Agricultural and pharmaceutical molecules
- As a green carrier in flavor and fragrances
- In UV cure applications
- In surfactants
- Adhesives
- Sealants
- Coatings

## Compatibility

**Kanamoll** is compatible with a variety of surface coating materials like PVC, PVA, nitro cellulose, chlorinated rubber etc. Being an acid acceptor, it imparts stability to coating formulations besides better resistance to extraction by soap, detergent and salt solutions. It also partially imparts resistance to migration compared to conventional plasticizers in surface coating formulations. In addition, improves adhesion, toughness, gloss and chemical resistance of the film.



## Recommended Dosage

### Plasticized PVC

In general, **Kanamoll** is used at a concentration of 2-5 PHR and up to 10% of the Plasticizer content has proved to give good results.

### Rigid PVC

Recommended concentration is 1-3 PHR

### Standard Packing

200kg Plastic/MS Drums

### Storage Instructions

- Drums should be kept in dry conditions and exposure to sunlight should be avoided.
- Prolonged storage conditions do not change the stabilizing efficiency of **Kanamoll**.

### Handling

Being non-corrosive in nature, spillage of **Kanamoll** on the floor or human hands does not cause any specific problems. Normal wash with soap or detergent with plenty of water would be adequate



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