

---

# MECOSTAT<sup>®</sup>-3

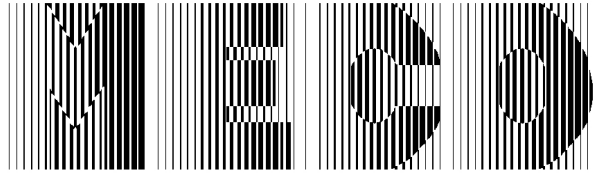
Antistatic Agent for expanded Polystyrene (EPS) and  
expanded Polypropylene (EPP)

Food Packaging and Technical Applications

MECOSTAT<sup>®</sup>-3/562

**MECO**  
**ENERGIE-KOLLEKTOREN GmbH**  
Von-Steinbeis-Str. 7  
D-78476 Allensbach / Germany

phone: ++49 (0) 75 33 / 94 98 3 - 0  
fax: ++49 (0) 75 33 / 94 98 3 - 33  
e-mail: [service@mecostat.de](mailto:service@mecostat.de)  
Internet: <http://www.mecostat.com>



## **General**

**MECOSTAT-3/562** is a highly effective liquid additive for antistatic finishing of expandable polystyrene and polypropylene.

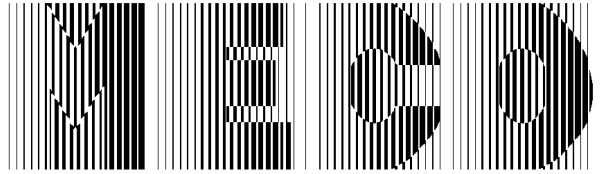
The antistatic agent acts even at a low relative humidity and provides a stable, permanent antistatic finishing for several years.

## **Areas of Application**

- high-quality antistatic equipment of technical products and electronic items as for example
  - EPS/EPP-items for the taking of technical products
  - foamed items for food packaging
  - EPS-packing chips
  - EPS/EPP trays
  - foamed drinking cups

## **Typical properties**

- long-term antistatic treatment for several years with reduction of the surface resistance as far as  $10^8 \Omega$  at standard climatic conditions
- antistatic effect also at very low humidity (< 20%)
- strong adhesion of the antistatic agent to the plastic surface resulting in high stability against physical effects such as friction etc.
- the coating is temperature resistant resulting in unproblematic processing without impairing the antistatic finishing
- the slip properties of the plastic surfaces are improved considerably by the product
- **MECOSTAT-3/562** replaces antistatic additives
- no accumulation during recycling
- **MECOSTAT-3/562** is highly productive and therefore keeps down costs of antistatic finishing
- usable in the packing industry for foodstuffs according to EC-Directives
- unproblematic recycling of the coated plastics



## Processing Directions

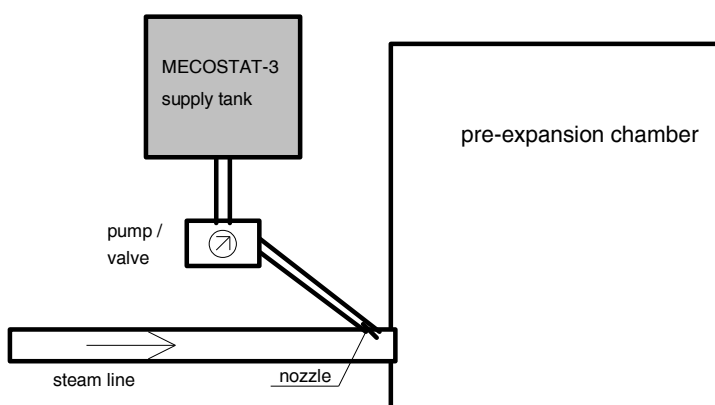
- The following different processes are basically available for the addition of the antistatic additive:
  - Addition of the antistatic agents during pre-expansion in a continuous process via the steam line admission point  
or :
  - Mixing the plastic and the antistatic agent prior to the pre-expansion process in a batch mixer (e.g. at the same time as the special dye is added)
- **MECOSTAT-3/562** is supplied as a ready for use solution, if required, the product can be diluted with demineralised water
- machine parts which come into contact with **MECOSTAT-3/562** should be made of corrosion proof materials but not from copper, aluminium and their alloys
- a combination of **MECOSTAT-3/562** with antistatic additives is not recommended because of possible reactions
- for detailed processing and safety information, please refer to the appropriate safety data sheet
- due to the large number of applications and processing procedures we would like to point out that corresponding tests have to be performed by the customer to make sure that there will be no incompatibility with the raw materials, additives and the processing procedures

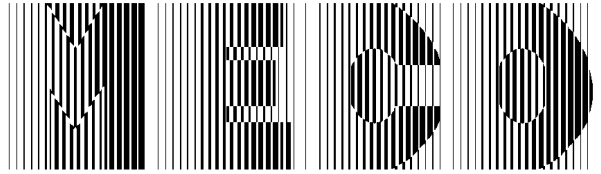
## Addition during continuous pre-expansion

The antistatic agent is added into the steam line admission point during pre-expansion. The antistatic agent can be dosed via a dosing pump or by excess liquid pressure, controlled by a needle valve, depending on the particular design of the system.

The added quantity of antistatic agent should be in the range 1 - 4 (weight-) %, referred to the throughput quantity of EPS/EPP, depending on the intended application.

## Schematic sketch of application





---

## **Addition prior to pre-expansion**

This method is suitable both when using continuous pre-expanders and when using intermittent pre-expansion of individual batches.

The antistatic agent is added to the EPS raw material (not pre-expanded) in a batch mixer and is then mixed for a brief period.

If dyes are to be added, these must be added first and fixed. After fixing, the antistatic agent is added, whereby the dosage should be in the range of 1 to 4 (weight-) % (depending on the intended application and material type).

## **Safety**

**MECOSTAT-3/562** as well as the raw materials contained in it comply with the appropriate EC-Directives on the antistatic finishing of plastics in food packaging.

**MECOSTAT-3/562** is environment-friendly and easily biodegradable.

## **Form of delivery and containers for antistatic agents used for EPS**

Form of delivery: Ready-to-use, liquid solution

Container sizes: 20 ltr canisters, 640 and 1000 ltr IBC container

## **Service**

We offer comprehensive technical advice with regard to both, to the right choice of the best suited type of material for application and to the coating systems.