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# MECOSTAT<sup>®</sup>-3

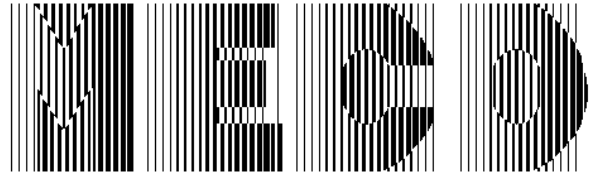
Surface Anti-Static Agents for Plastics

Special type for packaging  
of electronic items and devices

MECOSTAT<sup>®</sup>-3/221

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## General

**MECOSTAT-3** - Surface AntiStatic Agents are highly effective liquid coating materials for the anti-static treatment of plastic surfaces as well as for improving slip properties.

The resistance to temperature of the coating guarantees that subsequent thermoforming can be performed without suffering any damage. Furthermore, the anti-static treatment of the material remains virtually unaffected by the stretching of the material during the thermoforming process.

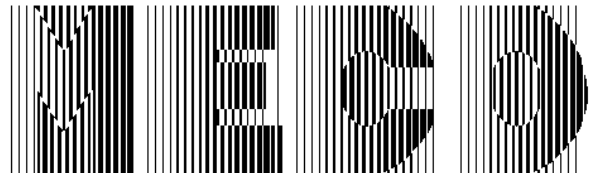
## Areas of Application

Anti-static treatment of

- special packaging for electronic items and devices
- thermoforming sheet
- other foils and sheets
- moulded, injection moulded and hollow bodied parts
- profiles

## Typical Coating Properties

- long term anti-static treatment for several years with reduction of the surface resistance as far as  $1 \times 10^6 \Omega$  even at low rel. humidity ( $< 10\%$  rH)
- anti-static effectiveness at a very low humidity of the air
- strong adhesion of the anti-static agent to the plastic surface resulting in high stability against physical effects such as friction etc.
- the coating is temperature resistant resulting in unproblematic thermoforming without impairing the anti-static treatment
- a high degree of cross-linkage on plastic surfaces resulting in good anti-static treatment even under major thermoforming conditions
- the slip properties of the plastic surfaces are improved considerably by the coating, therefore improving the stackability of thermoformed parts
- no migration into the packed material, no accumulation during recycling
- highly transparent coating
- **MECOSTAT-3** is high yielding and therefore keeps down the costs of anti-static treatment
- unproblematic recycling of the coated plastics
- MECOSTAT-3/221 must not be used for food packaging, for this application please contact us



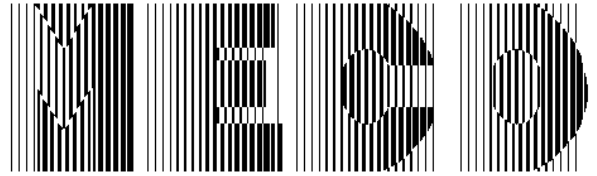
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## **Processing Directions**

- the following processes are suitable for coating: immersion, felting, roller application, application by flexographic or gravure printing (the appropriate processes are dependent on the particular application purpose)
- coating quantity: depending on the application purpose 1.0 to 3.0 g/sqm wet coating
- the coated surface must be completely dried before further processing or rolling up the foil (possibly air-dried)
- **MECOSTAT-3/221** is delivered as a ready-to-use solution
- machine parts which come into contact with **MECOSTAT-3** must be made of corrosion proof materials (not of copper, aluminium or alloys of them)
- a combination of **MECOSTAT-3** with anti-static / anti-blocking agents is not recommended because of possible reactions
- depending on the particular application corona pre-treatment is recommended (on polyolefines)
- for detailed processing and safety information, please refer to the appropriate Safety Data Sheets
- 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

## **Service**

We offer comprehensive technical support with regard to not only the choice of the right type of material for application but also to the coating systems.



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## Calculation of consumption rate

### consumption rate of MECOSTAT-3 per kg plastic

$$\text{consumption MECOSTAT per kg plastic [g]} = \frac{\text{coating rate/m}^2 \text{ [g]} \times 1000}{\text{foil thickness}[\mu\text{m}] \times \text{spec. weight of the used plastic [g/cm}^3\text{]}}$$

### coated foil per kg MECOSTAT-3

$$\text{coated foil per kg MECOSTAT [kg]} = \frac{\text{foil thickness}[\mu\text{m}] \times \text{spec. weight of the used plastic[g/cm}^3\text{]}}{\text{coating rate/m}^2 \text{ [g]}}$$

### Approx. value of spec. weights of different plastics

The exact spec. weight depends on the used plastic formula and on the used additives.  
The given values are therefore only approximated values.

APET	: 1.35 g/cm <sup>3</sup>
PVC	: 1.42 g/cm <sup>3</sup>
PP	: 0.93 g/cm <sup>3</sup>
PETG	: 1.17 g/cm <sup>3</sup>
LDPE	: 0.95 g/cm <sup>3</sup>
HDPE	: 0.92 g/cm <sup>3</sup>
PS	: 1.10 g/cm <sup>3</sup>
ABS	: 1.12 g/cm <sup>3</sup>
PC	: 1.20 g/cm <sup>3</sup>
PTFE	: 2.16 g/cm <sup>3</sup>
PMMA	: 1.18 g/cm <sup>3</sup>
PUR	: 1.25 g/cm <sup>3</sup>