

MECOSTAT[®]-3

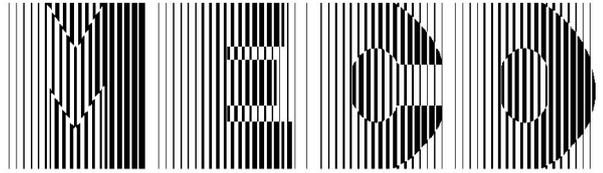
Antistatic Coating Agent for Plastics

**Special type for technical applications
and for antistatic fabrics**

MECOSTAT[®]-3/225

**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
Internet: <http://www.mecostat.com>**



General

MECOSTAT-3/225 surface antistatic agent is a highly effective liquid coating material for the antistatic finishing of plastic surfaces as well as for improving slip properties.

Fabrics coated with **MECOSTAT-3/225** comply with the certificate class-C for antistatic-conductive bags.

Areas of Application

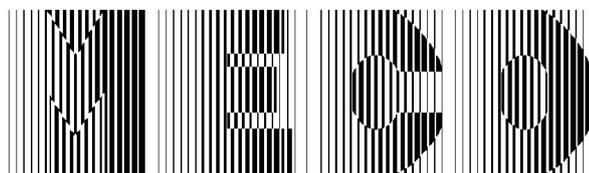
- mono- and multifilaments
- woven plastics
- class-C certified antistatic-conductive bags
- thermoforming sheets > 1000 µm

Typical Properties of the Coating with MECOSTAT-3/225

- long-term antistatic finishing for several years with reduction of the surface resistance as far as $10^6 \Omega$ at standard climatic conditions
- antistatic effect also at low humidity (< 30%)
- strong adhesion of the antistatic agent to the plastic surface resulting in high stability against physical effects such as friction etc.
- temperature resistant coating
- Fabrics coated with **MECOSTAT-3/225** comply with the certificate class-C for antistatic-conductive bags.
- the slip properties of the plastic surfaces are considerably improved by the coating
- **MECOSTAT-3/225** replaces the additives used until now to a large extent
- no migration into the goods filled, no accumulation during recycling
- striation-free highly transparent coating
- **MECOSTAT-3/225** is highly productive and therefore keeps down costs of antistatic finishing
- problem-free recycling of coated plastics

Shelf life

The shelf life from delivery date is at least 1 year under normal storage conditions in sealed cans.



Processing Directions

- the following processes are suitable for coating: immersion bath, felt application, roll coating and application by flexographic or gravure printing, spray coating, rotor spraying coating (the appropriate procedures depend on the purpose of application).
- If **MECOSTAT-3/225** is applied on warm plastic surfaces, the surface temperature should not exceed 80 °C
- coating quantity: according to the purpose of application between 2 and 5 g per sqm (wet coating amount)
- the coated surface must be completely dry before further processing or winding the film (if required, drying with warm air)
- **MECOSTAT-3/225** is supplied as a ready for use solution, the product must not be diluted. Dilution will have a negative effect on the antistatic properties, first of all on the long term antistatic properties and on the adhesion of the antistatic agent to the plastic surface
- machine parts which come into contact with **MECOSTAT-3/225** should be made of corrosion proof materials but not from copper, aluminium and their alloys
- a combination of **MECOSTAT-3/225** with antistatic additives is not recommended because of possible reactions
- depending on the application, a corona pretreatment is recommended (e.g. on polyolefines and polystyrene)
- 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
- the material has to be used undiluted

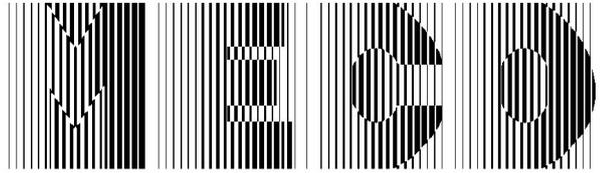
Environmental compatibility

MECOSTAT-3/225 is environment-friendly and easily biodegradable.

Service

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

Our application technology department is at your disposal for the conception of optimal application systems, as well as for preparing upgrade suggestions for installations already in use.



Calculation of the consumption rate

consumption rate of MECOSTAT-3 per kg plastic

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

coated sheet per kg MECOSTAT-3

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

Typical value of spec. weights of different plastics

The exact specific weight depends on both, the plastic formula used and on the additives used. Therefore, the given values are only approximated values.

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