

MECOSTAT[®]-3

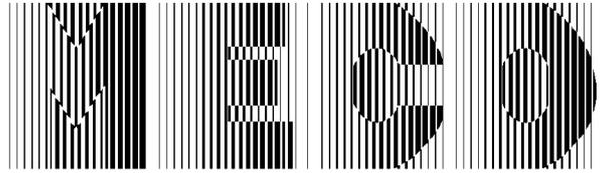
Antistatic Coating Agent for Plastics

**Special type for packaging
of technical items and devices**

MECOSTAT[®]-3/144

**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-3/144 - Surface AntiStatic Agents are highly effective liquid coating materials for the antistatic finishing 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 antistatic finishing of the material remains virtually unaffected by the stretching of the material during the thermoforming process.

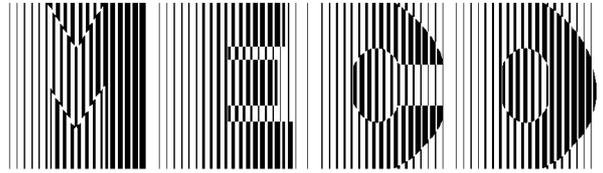
Areas of Application

Antistatic finishing of

- special packaging for technical items and devices
- thermoforming sheet (up to 800 µm)
- other films and sheets
- moulded, injection moulded and hollow bodied parts
- profiles

Typical Coating Properties

- long term anti-static finishing for several years with reduction of the surface resistance as far as $1 \cdot 10^7 \Omega$ at standard climatic conditions
- antistatic effect also at low humidity (< 15 % rH)
- 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 thermoforming without impairing the antistatic finishing
- excellent wetting properties on plastic surfaces resulting in good antistatic finishing even under difficult 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
- striation-free highly transparent coating
- **MECOSTAT-3/144** is high yielding and therefore keeps down costs of antistatic finishing
- unproblematic recycling of the coated plastics
- **MECOSTAT-3/144** must not be used for food packaging, for this application please contact us



Processing Directions

- the following processes are suitable for coating: immersion, felting, roller application, application by flexographic or gravure printing spray coating, rotor spraying coating (the appropriate processes are dependent on the particular application purpose)
- coating quantity: depending on the application purpose 1.0 to 3.5 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)
- If **MECOSTAT-3/144** is applied on warm plastic surfaces, the surface temperature should not exceed 80 °C
- **MECOSTAT-3/144** is delivered as a ready for use solution
- machine parts which come into contact with **MECOSTAT-3/144** should be made of corrosion proof materials (not of copper, aluminium or alloys of them)
- a combination of **MECOSTAT-3/144** with antistatic agents is not recommended because of possible reactions
- depending on the particular application corona pretreatment is recommended (on polyolefines and polystyrene)
- 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

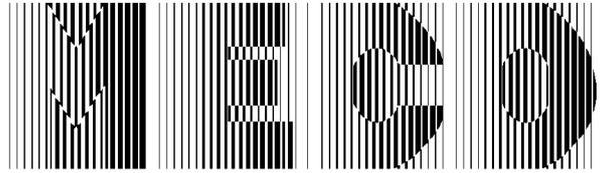
Environmental compatibility

MECOSTAT-3/144 is environment-friendly and easily biodegradable.

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.

Our Application Technology Department is at your disposal for the design of optimal application processes as well as for preparing suggestions for adapting installations already in use.



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 specific weight depends on both, the plastic formula used and on the additives used. The given values are therefore 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