

## ALTMANN „TUBE-O-LATOR“ LACQUER

### OVERTONE-FILTER COATING-COMPOUND FOR PLASTIC SEMICONDUCTOR PACKAGES

#### FEATURES:

- „*tubesound coating*“
- *filters unwanted overtones from semiconductors like DA-converters, AD-converters, OP-amps, transistors*
- *improves the sound quality of CD-players, DVD-or SACD-players, preamplifiers, phono-stages, main or power amplifiers*
- *transforms transistor-sound into tube-sound*
- *transforms cold harsh sound into warm emotional sound*
- *attenuates odd, especially third overtones*
- *easily applicable*
- *performance can be monitored with FFT measurement equipment (AP)*
- *all other electrical specifications of treated components remain unchanged*
- *no soldering or removing of components necessary*
- *makes semiconductors sound natural*
- *improves the sound quality of AD and DA conversions*
- *comes in recloseable 0,5ml process tube with applicator and instructions*



ALTMANN - „TUBE-O-LATOR“ LACQUER  
test-tube and applicator

#### DESCRIPTION:

The ALTMANN „TUBE-O-LATOR“ lacquer is a high performance overtone-filter coating-compound, designed for plastic encapsulated analog- and mixed-signal-semiconductors.

The ALTMANN „TUBE-O-LATOR“ lacquer is applied only on the top surface of plastic semiconductor packages of AD-converter-chips, DA-converter-chips, OP-amps and discrete transistors.

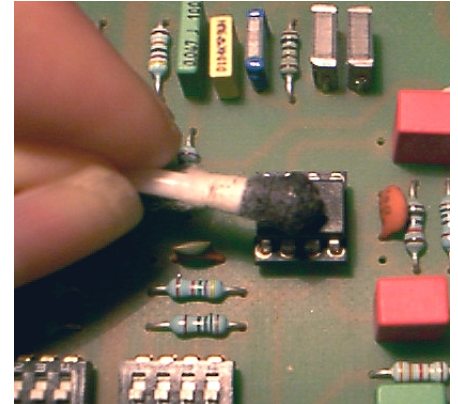
After application, the overtone spectrum of these active devices changes immediately and permanently. The new sonic signature will be natural, full and tube-like.

**DESCRIPTION CONTINUED:**

The ALTMANN „TUBE-O-LATOR“ lacquer electromechanically balances the resonance-spectrum of the plastic chip package and semiconductor itself in such a way, that a natural sounding overtone-spectrum of the treated active device will be generated.

The lacquer is not applied to the leads and has no impact on the manufacturer's electrical specifications of the device.

The performance of the ALTMANN „TUBE-O-LATOR“ lacquer has been successfully tested with AD- & DA-converters, operational amplifiers, discrete power transistors as well as integrated power-modules. Bipolar & MOSFET, SMD & through-hole technology.



*application example: OP-amp in phono stage*

**TECHNICAL DATA:**

Fast drying at room temperature.

No unpleasant fumes during coating and after further processing.

color, appearance	black
moisture and insulation resistance	class H, IPC-TM-650, TM 2.6.3.1.
surface resistance	1,0 x E13 Ohm, VDE 0303, part 3
method of application	brushing
curing conditions until tack free	30 min
complete curing (sonic character)	20 days

**PROCESS INFORMATION:**

The Altmann „TUBE-O-LATOR“ lacquer comes in a rugged 0,5ml recloseable process tube. Due to the small surfaces of most semiconductor packages, the content of a single tube will suffice for the sound-treatment of a complete hifi system (fe. including disc-player, DA-converter, preamplifier and main-amplifier).

Before application, the contents of the process-tube must be intermixed. Mixing can be done manually (ie. by shaking and hitting the tube on a table).

For OEM customers we recommend the use of an automated vortex mixing device. Please contact us for assistance.

**APPLICATIONS:**

high end consumer audio  
 high quality broadcast applications  
 recording equipment  
 CD & DVD mastering / mastering

**ONLINE SUPPORT:**

Updated information and user manuals can be accessed from our web-sites:

[www.altmann.haan.de](http://www.altmann.haan.de)

[www.jitter.de](http://www.jitter.de)