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LABORATORY ACCREDITATION BUREAU
ACCREDITED ISO/IEC 17025
Certificate # L2267 Testing

Evaluation of Brass on Leather

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Project #: 11-203-1825(bis)

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Date: September 27, 2011

Background: Customer is a manufacturer of metal zippers from brass for leather jackets. The leather used in the jackets contains a lot of sulfur compounds, which cause significant corrosion of the brass zippers.

Purpose: To find a rust preventative solution that will protect brass when in contact with leather.

Samples Received: 1) 11 Brass panels (1 x 1.5 inches), provided by customer
2) Leather, provided by customer

Method: Humidity test in desiccant chamber, procedure provided by customer

Materials: Desiccant chamber
VpCI-316
M-235
Ethanol

Procedure: The following procedure was followed:
-Add 100ml of DI water to the bottom of the desiccant chamber.
-Place the plate above the water and the leather on the plate with the finished side on top.
-Place the brass panels directly on the leather. (note: the treated brass panels were dipped and hung to dry before placing on the leather).
-Seal the chamber with silicon grease.
-Place the chamber in a 50°C oven for 48 hours.

Results: The following results were found:

Brass treatment	Front Side (facing away from leather)	Side facing the leather
Control- no treatment	medium corrosion/tarnish ~50% blackened	heavy corrosion/tarnish 100% blackened
10% VpCI-316 in DI water	light tarnish, with a few black spots	medium corrosion/tarnish 50-75% blackened
1.5% M-235 in DI water	light tarnish, no black spots	medium corrosion/tarnish ~50% blackened with spots
5% M-235 in Ethanol	light tarnish, no black spots	light corrosion/tarnish, ~10% black spots
10% M-235 in Ethanol	light tarnish, no black spots	light corrosion/tarnish, <5% black spots

Interpretations: Based on the test results M-235 10% solution in alcohol provides the best corrosion protection to the submitted brass samples.

Pictures:

Control (front side)

Control (leather side)

10% VpCI-316 (front side)

10% VpCI-316 (leather side)

1.5% M-235 in DI water (front side)

1.5% M-235 in DI water (leather side)

5% M-235 in Ethanol
(front side)

5% M-235 in Ethanol
(leather side)

10% M-235 in Ethanol
(front side)

10% M-235 in Ethanol
(leather side)

Untested brass panel