



ROYAL COATINGS INCORPORATED

2705 Concord Road
Belle Chasse, LA 70037 USA
Tel: (504)392-8811 * Fax: (504)392-2173

Immersion Study
Easy Novo
9-30-2010

Easy Novo was poured into aluminum dishes at 1/8 inch thickness. After drying the coupon chips were removed and weighed. They were allowed to dry at room temperature for 1 week. The chips were then placed in various liquids for seven weeks. The chips were removed, rinsed, patted dry, and reweighed. Any weight gain below 2.5% is considered suitable for use in a tank lining.

Suitable Liquid

10% HCl	1%
Isopropanol	0.7%
Water	0.7%
Soy Methyl Ester (biodiesel)	0.3%
10% NaOH	0.7%
10% H ₂ SO ₄	2.0%
70% H ₂ SO ₄	1.0%

Failed

Acetic Acid
Butyl Cellosolve
Xylene



The Coatings Laboratory

A Member of the ITI Group



10175 Harwin, Ste. 110 • Houston, Texas 77036 • Tel: (713) 981-9368
Fax: (713) 776-9634 • Email: paintlab@paintlab.com • Web Page: www.paintlab.com

Mr. Owen Jones
Royal Chemical Corporation
PO Box 342
Gretna, LA 70054

Re: Immersion Testing of Easy Novo. Laboratory File #7691.

A kit of Royal-Easy Novo was received by the laboratory via UPS, Tracking #1Z 3E8 501 13 4209 1145.

A portion of the Royal Easy Novo was mixed per the provided mix ratio by weight and applied to 8, 2"x6" A-36 col-rolled steel panels with a surface profile of 2-3 mils. After 24 hours, the backs of the panels were coated as well. The panels were then allowed to cure for 7 days at 75±5°F and 50±10% Relative Humidity.

The panels were split into four groups of two. Each group was then partially immersed in a different fluid: Naptha, Gasoline (no added oxygenate), Kerosene and light, sweet Crude Oil. Partial immersion was chosen to evaluate the effect of both immersion and exposure to the vapor phase of the fluid. The coupons were exposed at 100±2°F. At 6 weeks and 12 weeks, the coupons were then removed from their respective fluids, wiped dry, evaluated and returned to their respective test fluids. At 13 weeks, the Gasoline was replaced with a solution of 5.0 weight % MTBE in Gasoline.

Naptha:

6 weeks: No blistering, cracking, fading, softening or other apparent effects on either the immersed portion or the vapor phase portion.

12 weeks: No blistering, cracking, fading, softening or other apparent effects on either the immersed portion or the vapor phase portion.

18 weeks: No blistering, cracking, fading, softening or other apparent effects on either the immersed portion or the vapor phase portion.

24 weeks: No blistering, cracking, fading, softening or other apparent effects on either the immersed portion or the vapor phase portion.

Kerosene:

6 weeks: No blistering, cracking, fading, softening or other apparent effects on either the immersed portion or the vapor phase portion.

12 weeks: No blistering, cracking, fading, softening or other apparent effects on either the immersed portion or the vapor phase portion.

18 weeks: No blistering, cracking, fading, softening or other apparent effects on either the immersed portion or the vapor phase portion.

24 weeks: No blistering, cracking, fading, softening or other apparent effects on either the immersed portion or the vapor phase portion.

Gasoline:

6 Weeks: Yellow staining of the immersed portion only. No blistering, cracking, fading, softening or other apparent effects on either the immersed portion or the vapor phase portion.

12 Weeks: Somewhat increased yellow staining of the immersed portion only. No blistering, cracking, fading, softening or other apparent effects on either the immersed portion or the vapor phase portion.

18 weeks: Yellow staining of the immersed portion only. No blistering, cracking, fading, softening or other apparent effects on either the immersed portion or the vapor phase portion.

24 weeks: Yellow staining of the immersed portion only. No blistering, cracking, fading, softening or other apparent effects on either the immersed portion or the vapor phase portion.

Crude Oil:

6 Weeks: Yellow staining of the immersed portion only. No blistering, cracking, fading, softening or other apparent effects on either the immersed portion or the vapor phase portion.

12 Weeks: Somewhat increased yellow/brown staining of the immersed portion only. No blistering, cracking, fading, softening or other apparent effects on either the immersed portion or the vapor phase portion.

18 weeks: Yellow/brown staining of the immersed portion only. No blistering, cracking, fading, softening or other apparent effects on either the immersed portion or the vapor phase portion.



24 weeks: Yellow/brown staining of the immersed portion only. No blistering, cracking, fading, softening or other apparent effects on either the immersed portion or the vapor phase portion.

A handwritten signature in black ink, appearing to read 'T.R. Schwerdt', with a long horizontal line extending to the right.

Thomas R. Schwerdt
Managing Chemist
The Coatings Laboratory at ITI Anti-Corrosion, Inc.

June 5, 2003