

LASRA[®] TECHNICAL REPORT

NZ Leather & Shoe Research Association PO Box 8094 Hokowhitu 4446
 Palmerston North New Zealand
 phone: 0064 06 355 9028 fax: 0064 06 354 1185
 email: info@lasra.co.nz website: www.lasra.co.nz

client name : Footwear Industries Pty Ltd LASRA ref : G/258
 client address : PO Box 2320
 Malaga WA 6944
 AUSTRALIA
 date received : 23/08/10 date out : 22/11/10 page : 1 of 1
 client reference/contact : Email dated 20 August 2010 Brad Cassidy
 description : Four leathers marked 1 - 4

Four leathers marked 1 – 4 were received for spot test resistance to various chemicals. The leathers had the following applications applied by yourselves. Leather 1 – Lanotec grease, leather 2 – Lanotec liquid spray, leather 3 – Dubbin grease and leather 4 – Tantec wax.

The leathers were exposed to the following chemicals in drop form(3ml) to simulate splash exposure. These were concentrated or highly acid or alkali substances.

Our results are as follows:

1. Concentrated nitric acid (HNO₃)	
Leather 1	Runs off fast (like water), once settled destroys finish in 10 minutes
Leather 2	Droplet forms but spreads and finish dissolved in 10 minutes
Leather 3	Droplet absorbed in 4 hours
Leather 4	Droplet absorbed in 4 hours
1/10 Nitric acid (1/10 HNO₃)	
Leather 1	Dried overnight, slight finish erosion
Leather 2	Dried overnight, slight finish erosion
Leather 3	Dried overnight, slight finish erosion
Leather 4	Dried overnight, slight finish erosion
15% Sulphuric acid (battery acid)	
Leather 1	Slight halo
Leather 2	Slight halo
Leather 3	Slight bleed of colour
Leather 4	Slight halo
30% Hydrochloric acid (30% HCl)	
Leather 1	Slight halo
Leather 2	Slight halo
Leather 3	Yellowed surface no damage
Leather 4	Slight halo
30% Caustic (30% NaOH)	
Leather 1	Slight corrosion of finish
Leather 2	Slight corrosion of finish
Leather 3	Slight corrosion of finish
Leather 4	Slight corrosion of finish

Guidance is available from LASRA regarding sampling; results can only apply to samples as received
 Opinions and interpretations, where these are expressed, are outside the scope of the laboratory's terms of IANZ registration
 This information is provided for, or at the request of members in accordance with the Rules of the Association
 and without liability and may only be reproduced in full

LASRA[®] TECHNICAL REPORT

NZ Leather & Shoe Research Association PO Box 8094 Hokowhitu 4446
Palmerston North New Zealand
phone: 0064 06 355 9028 fax: 0064 06 354 1185
email: info@lasra.co.nz website: www.lasra.co.nz

client name : Footwear Industries Pty Ltd LASRA ref : G/258B
client address : PO Box 2320
Malaga WA 6944
AUSTRALIA
date received : 23/08/10 date out : 22/11/10 page : 1 of 1
client reference/contact : Email dated 20 August 2010 Brad Cassidy
description : One sample of upper leather marked '2' applied with lanotec liquid spray

One sample of upper leather marked '2' applied with lanotec liquid spray was received for trial of its resistance to ageing whilst exposed to various contamination sources.

The treatment was total immersion of the leather in a saturated solution of the contaminate, held in storage for 6 weeks at 70°C. Our experience of this test, and International Standard testing procedures, give this test an equivalent to wear exposure of 12 to 18 months of normal use in the test contaminate.

The exposed samples were then subject to TM 25 vamp flex tests after a mild wash in tap water, and drying overnight before flexing. The duration for the flex test was one million flexes and is the equivalent of 6 months of steady use of the boot leather.

Contaminate	Flex resistance Result (cracks at 1 million flexes)
Water	no cracks
Saturated salt (sodium chloride)	no cracks
Saturated lime (calcium hydroxide)	no cracks
30% Ammonium nitrate	no cracks
Sodium hypochlorite (Black)	no cracks
Ammonium chloride	no cracks
Mud (soil saturated in water)	no cracks
Domestic bleach (70%)	one very small crack

Only one very small crack occurred after exposure to a concentrated solution of domestic bleach. This may reflect the fat/oil removal properties, and plasticiser removal properties of bleach cleaners.

analyses/assessment by : PR
report checked by : WGB
date : 22/11/10

signed :

charge hours : designation of signee : Peter Roy
Senior Technical Officer
(Mechanical)

LASRA[®] TECHNICAL REPORT

NZ Leather & Shoe Research Association PO Box 8094 Hokowhitu 4446
Palmerston North New Zealand
phone: 0064 06 355 9028 fax: 0064 06 354 1185
email: info@lasra.co.nz website: www.lasra.co.nz

client name : Footwear Industries Pty Ltd LASRA ref : G/258A
client address : PO Box 2320
Malaga WA 6944
AUSTRALIA
date received : 23/08/10 date out : 22/11/10 page : 1 of 1
client reference/contact : Email dated 20 August 2010 Brad Cassidy
description : One sample of upper leather marked '1' applied with lanotec grease

One sample of upper leather marked '1' applied with lanotec grease was received for trial of its resistance to ageing whilst exposed to various contamination sources. The treatment was total immersion of the leather in a saturated solution of the contaminate, held in storage for 6 weeks at 70°C. Our experience of this test, and International Standard testing procedures, give this test an equivalent to wear exposure of 12 to 18 months of normal use in the test contaminate. The exposed samples were then subject to TM 25 vamp flex tests after a mild wash in tap water, and drying overnight before flexing. The duration for the flex test was one million flexes and is the equivalent of 6 months of steady use of the boot leather.

Contaminate	Flex resistance Result (cracks at 1 million flexes)
Water	no cracks
Saturated salt (sodium chloride)	no cracks
Saturated lime (calcium hydroxide)	no cracks
30% Ammonium nitrate	finish cracked
Sodium hypochlorite (Black)	no cracks
Ammonium chloride	no cracks
Mud (soil saturated in water)	no cracks
Domestic bleach (70%)	finish cracked

We note only the finish of the leather was cracked in ammonium chloride and strong domestic bleach. These exposure treatments we consider to be quite harsh and constitute a severe treatment. We consider the leather has withstood what could be considered mistreatment very well, and we note the two chemicals which did damage the finish are closely related to components of the processing of leather.

analyses/assessment by : PR
report checked by : WGB
date : 22/11/10

signed :



charge hours : 6.25

designation of signee : Peter Roy
Senior Technical Officer
(Mechanical)