

D.R. Diedrich & Company

Restricted Substance List (RSL) Testing: Wet Blue

Laboratory Test Certificate Number: 24014-WB

ISO 17025 LIMS Audit Trail Number: 10-00915-001

L-A-B Accredited Certification Number L2300 Testing

CPSC-Accredited to assess conformity with children's product safety
rules (lead content)

REPORT AUTHORIZED BY: Steve D. Lange (Director)
2/3/2014



RSL TEST CERTIFICATION		
Supplier	D.R. Diedrich & Company	
Sample Identification	Wet Blue (see figure 1)	
Submitted by	Martha Arbelaez	
Date of Sample Receipt	January 8, 2014	
Restricted Substance List	D.R. Diedrich & Company (10/15/13)	
RESTRICTED SUBSTANCE	RESULT	
EXTRACTABLE HEAVY METALS: Antimony, Arsenic, Cadmium, Cobalt, Copper, Lead, Mercury, Nickel, Selenium	Table 1	PASS
TOTAL HEAVY METALS: Cadmium, Lead, Tin, Aluminum, Titanium, Zirconium	Table 2	PASS
Chromium(VI) after aging	Table 3	PASS
O-Phenyl Phenol (OPP)	Table 4	PASS
Pentachlorophenol, Tetrachlorophenol, Trichlorophenol	Table 5	PASS
Alkyl Phenols & Alkyl Phenol Ethoxylates	Table 6	PASS
Cresol	Table 6	PASS
Dimethyl Fumarate	Table 6	PASS
Phenol	Table 6	PASS
Formaldehyde	Table 7	PASS
Pesticide screening	Table 8	PASS
REACH list	Table 9	PASS

Figure 1. SAMPLE PHOTOGRAPH





RESULTS

NOTE: all results & limits in all tables are expressed as mg/kg

Table 1. EXTRACTABLE HEAVY METALS

METAL	RESULT	LIMIT
ANTIMONY	< 0.006	5
ARSENIC	< 0.006	0.2
CADMIUM	0.0125	0.1
COBALT	< 0.006	1
COPPER	0.102	25
LEAD*	< 0.1	0.2
MERCURY	< 0.0002	< 0.02
NICKEL	0.112	1
SELENIUM	< 0.004	10
NOTE	All except lead (Pb) subcontracted to: TestAmerica, 4738 Gateway Circle, Dayton, OH 45440. TestAmerica is NELAP accredited	
TEST METHODS	Pre-treatment: Extraction using artificial acidic perspiration solution specified by ISO 105-E04: 2009 Analysis of Extract: ICP-OES or FAAS analysis except for: Mercury was tested using EPA Method 7470A Mercury in Liquid Waste (Manual Cold-Vapor Technique). Instrument: Perkin Elmer FIM 100 Hg analyzer. Lead was tested using AAS.	

* This laboratory is not accredited for tests marked thus, or for tests noted as subcontracted.



Table 2. TOTAL HEAVY METALS

METAL	RESULT	LIMIT
CADMIUM*	< 0.02 (Not detected)	40
LEAD	< 0.67 (Not detected)	< 20
TIN*	< 1 (Not detected)	Not detected
ALUMINUM*	< 10 (Not detected)	20 Total
TITANIUM*	< 1 (Not detected)	
ZIRCONIUM*	< 1 (Not detected)	
TEST METHODS	Acid digestion followed by AAS. Test Method: CPSC-CH-E1002-08.1 Standard Operating Procedure for Determining Total Lead (Pb) in Non-Metal Children's Products	



Table 3. CHROMIUM(VI) AFTER AGING

METAL	RESULT	LIMIT
CHROMIUM(VI)	1.6	< 3
TEST METHOD	Heat aging for 24 hours at 80°C and 20% relative humidity followed by ISO 17075; Leather – Chemical tests - Determination of chromium(VI) content	

Chromium(VI) Quality Assurance Data

Test Item	Result (%)	Target (%)
Moisture Content	58.8	n/a
Recovery Rate of Chromium(VI) Spike (test sample #1)	92	80 - 105
Recovery Rate of Chromium(VI) Spike (test sample #2)	88	80 - 105
Recovery Rate of Certified Quality Assurance Standard	99	90 - 110

Table 4. O-PHENYL PHENOL (OPP)

BIOCIDE	RESULT	LIMIT
O-PHENYL PHENOL (OPP)	< 5 (Not detected)	25
TEST METHOD	ISO 13365 Leather — Chemical tests — Determination of the preservative (TCMTB, PCMC, OPP, OIT) content in leather by liquid chromatography	



Table 5. PENTACHLOROPHENOL, TETRACHLOROPHENOL, TRICHLOROPHENOL*

BIOCIDE	RESULT	LIMIT
PENTACHLOROPHENOL	Not detected	0.05
TETRACHLOROPHENOL	Not detected	0.05
TRICHLOROPHENOL	Not detected	0.05
TEST METHOD	ISO 17070 / IULTCS IUC 25 Leather — Chemical tests —Determination of pentachlorophenol content (modified to include TeCP & TCP)	



Table 6. CERTAIN ORGANIC COMPOUNDS*

ORGANIC COMPOUND	RESULT	LIMIT
NONYLPHENOLS / NONYLPHENOL ETHOXYLATES (NP / NPEO)	Not detected (< 5)	Not detected
OCTYLPHENOL / OCTYLPHENOL ETHOXYLATES (OP / OPEO)	Not detected (< 5)	Not detected
TEST METHOD	ISO/DIS 18218-2 Leather — Determination of ethoxylated alkylphenols — Part 2: Indirect method Instrument used: HPLC	
CRESOL	Not detected < 0.1	< 0.1
TEST METHOD	Solvent extraction followed by GC/MS	
DMF	Not detected < 0.1	< 0.1
TEST METHOD	Solvent extraction followed by HPLC	
PHENOL	Not detected (< 5)	Not detected
TEST METHOD	Solvent extraction followed by GC/MS.	

Table 7. FORMALDEHYDE

ORGANIC COMPOUND	RESULT	LIMIT
FORMALDEHYDE	9.6	< 20
TEST METHOD	ISO 17226-1 Leather — Chemical determination of formaldehyde content — Part 1: Method using high performance liquid chromatography	



Table 8. PESTICIDE SCREENING*

PESTICIDES	RESULT	LIMIT
Aldrin, alpha & beta Endosulfanes, Carbaryl, Chlordane, Chlordecone (Kepone), Chlorthalonil, DDD, DDE, DDT, Dichlorfluanide, Dieldrin, Endrin, Ethylparathione, HCH, Heptachlor, Heptachloroepoxide, Isodrin, Kelevane, Lindane, Malathione, Methoxychlor, Mirex, Parathion Pentachloroanisole, Permethrin, Perthane, Quintozene, Storbane, Telodrin, Tolyfluanide, Toxaphene, Trifluraline, 2,4,5- trichlorophenoxyacetic acid, (2,4-T & its salts trichlorophenoxyacetyl compounds, 2-(2,4,5- trichlorophenoxy) proprionic acid.	None detected (< 0.5 per pesticide)	< 0.5 per pesticide
TEST METHOD	Hexane/acetone extraction followed by GC/MS.	



Table 9. REACH LIST*

SUBSTANCES	RESULT	LIMIT
Anthracene, DEHP, 4,4'-diaminodiphenylmethane, dibutyl phthalate, cobalt dichloride, diarenic pentoxide, sodium dichromate, 5-tert-butyl-2,4,6-trinitro-m-xylene, hexabromocyclododecane, α -HBCDD, β -HBCDD, γ -HBCDD, chlorinated short chain paraffins, bis(tributyltin) oxide, lead hydrogen arsenate, benzyl butyl phthalate, triethyl arsenate	None detectable	Not detectable
TEST METHOD	Various screening techniques	

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IMPORTANT INFORMATION

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