

## Test Report

Number: SZHH01775051

Applicant: DOREL HOME FURNISHINGS INC.  
410 EAST FIRST STREET SOUTH  
WRIGHT CITY, MO, 63990-1335

Date: Mar 21, 2023

Attn: ROCCO CALLO, KEN.WU

### Sample Description:

One (1) piece of submitted sample said to be :

Item Name : **Metal Bunk Bed, Twin Over Twin**  
Item No. : **4303019, 4303419, 4303619, 4303119**  
Reference No. : **4303019, 4303419, 4303619, 4303119**  
Labelled Age Group : Not Specified  
Applicant Specified Age : Over 3 years  
Grading for Testing :  
Packaging Provided by Applicant : Yes  
Additional Material and Wet Paint Provided : Yes  
Manufacturer : Fujian Wenrui Furniture Co., Ltd  
Country of Origin : China  
Country of Destination : USA  
Date Sample Received : Feb 28, 2023  
Testing Period : Feb 28, 2023 ~ Mar 21, 2023



### Tests conducted:

As requested by the applicant, refer to attached page(s) for details.



## Test Report

Number: SZHH01775051

### Conclusion:

Tested Sample  
Submitted Sample

Standard  
ASTM F1427-21<sup>ε1</sup> - Standard Consumer Safety  
Specification for Bunk Beds

Result  
Pass

16 CFR Part 1513 - Requirements for Bunk Beds Intended  
for Use by Children /  
16 CFR Part 1213 -Requirements for Bunk Beds not  
Intended for Use by Children

Pass

Test Item  
Ladder Strength Test on Metal Bunk Bed  
- As per the client's requirement

Pass

Requirement  
U.S. CFR Title 16 (CPSC Regulations)  
Mechanical and physical test

Pass

Test item  
Applicant's requirement on U.S. Consumer Product Safety  
Improvement Act 2008 Title I, Section 101 for total Lead  
content in surface coating

Pass  
(Remark #1)

Applicant's requirement on U.S. Consumer Product Safety  
Improvement Act 2008 Title I, Section 101 for Total Lead  
content in Non-surface coating materials (substrate)

Pass  
(Remark #2)

Dorel's requirement on total Lead (Pb) content

Pass  
(Remark #3)

Dorel's requirement on total Lead and Mercury content in  
Substrate

Pass  
(Remark #4)

Applicant's requirement on soluble heavy elements test

Pass  
(Remark #5)

Applicant's requirement on U.S. CFR Title 16 Part 1303  
total Lead content

Pass  
(Remark #6)

Dorel's requirement on total Lead and Mercury content in  
surface coating

Pass  
(Remark #7)

Applicant's requirement on Canada Consumer Product  
Safety Act Toys Regulations SOR/2011-17 Section 23 on  
toxic elements test

Pass  
(Remark #8)



## Test Report

Number: SZHH01775051

<u>Tested Sample</u> Submitted Sample	<u>Test item</u>	<u>Result</u>
	Applicant's requirement on Canada Consumer Product Safety Act Toys Regulations SOR/2011-17 Section 27(a) on Heavy metal test	Pass (Remark #9)
	Applicant's requirement on Canada Consumer Products Containing Lead Regulations SOR/2018-83	Pass (Remark #10)
	Applicant's requirement on Canadian Environmental Protection Act Products Containing Mercury Regulations SOR/2014-254 on total Mercury (Hg) content in product except battery	Pass (Remark #11)
	Applicant's requirement on U.S. ASTM F963-17 on total Lead content in non-surface coating	Pass (Remark #12)
	Applicant's requirement on U.S. ASTM F963-17 on total Lead content in surface coating	Pass (Remark #13)
	Applicant's requirement on U.S. ASTM F963-17 on soluble heavy elements test	Pass (Remark #14)
	Applicant's requirement on US Consumer Product Safety Improvement Act 2008 Title I, Sec 108(a) & (b)(3) and US 16 CFR Part 1307 for Prohibition of Children's Toys and Child Care Articles Containing Specified Phthalates	Pass (Remark #15)
	Applicant's requirement on DHP QP-00005 Phthalate content	Pass (Remark #16)
	Applicant's requirement on Canada Consumer Product Safety Act Surface Coating Materials Regulations SOR/2016-193 (former registration No. is SOR/2005-109) on total Lead content	Pass (Remark #17)

### Remark:

- #1 = As per applicant 's requirement, Intertek report SZHH01717892 dated Jul 29, 2022; SZHH01700262 dated Jun 13, 2022 were provided for verification which met the requirements of Total Lead (Pb) Content, actual test was not conducted.
- #2 = As per applicant 's requirement, Intertek report SZHH01741034 dated Oct 24, 2022; SZHH01754104 dated Dec 13, 2022; SZHH01775560 dated Mar 07, 2023 were provided for verification which met the requirements of Total Lead (Pb) Content in Non-Surface Coating Materials (Substrate), actual test was not conducted.
- #3 = As per applicant 's requirement, Intertek report SZHH01717892 dated Jul 29, 2022; SZHH01700262 dated Jun 13, 2022; SZHH01741034 dated Oct 24, 2022; SZHH01754104 dated Dec 13, 2022; SZHH01775560 dated Mar 07, 2023 were provided for verification which met the requirements of Total Lead (Pb) Content, actual test was not conducted.



## Test Report

Number: SZHH01775051

- #4 = As per applicant 's requirement, Intertek report SZHH01741034 dated Oct 24, 2022; SZHH01754104 dated Dec 13, 2022; SZHH01775560 dated Mar 07, 2023 were provided for verification which met the requirements of Total Lead (Pb) and Mercury (Hg), actual test was not conducted.
- #5 = As per applicant 's requirement, Intertek report SZHH01717892 dated Jul 29, 2022; SZHH01700262 dated Jun 13, 2022; SZHH01741034 dated Oct 24, 2022 were provided for verification which met the requirements of Heavy Elements Analysis, actual test was not conducted.
- #6 = As per applicant 's requirement, Intertek report SZHH01717892 dated Jul 29, 2022; SZHH01700262 dated Jun 13, 2022 were provided for verification which met the requirements of Total Lead (Pb) Content, actual test was not conducted.
- #7 = As per applicant 's requirement, Intertek report SZHH01717892 dated Jul 29, 2022; SZHH01700262 dated Jun 13, 2022 were provided for verification which met the requirements of Total Lead (Pb) and Mercury (Hg) Content, actual test was not conducted.
- #8 = As per applicant 's requirement, Intertek report SZHH01717892 dated Jul 29, 2022; SZHH01700262 dated Jun 13, 2022 were provided for verification which met the requirements of Toxic Elements Analysis, actual test was not conducted.
- #9 = As per applicant 's requirement, Intertek report SZHH01741034 dated Oct 24, 2022 was provided for verification which met the requirements of Heavy Metal Analysis in Plastic Material, actual test was not conducted.
- #10 = As per applicant 's requirement, Intertek report SZHH01717892 dated Jul 29, 2022; SZHH01700262 dated Jun 13, 2022; SZHH01741034 dated Oct 24, 2022; SZHH01754104 dated Dec 13, 2022; SZHH01775560 dated Mar 07, 2023 were provided for verification which met the requirements of Total Lead (Pb) Content, actual test was not conducted.
- #11 = As per applicant 's requirement, Intertek report SZHH01741034 dated Oct 24, 2022 was provided for verification which met the requirements of Mercury content, actual test was not conducted.
- #12 = As per applicant 's requirement, Intertek report SZHH01741034 dated Oct 24, 2022; SZHH01754104 dated Dec 13, 2022; SZHH01775560 dated Mar 07, 2023 were provided for verification which met the requirements of Total Lead (Pb) Content in Non-Surface Coating Materials (Substrate), actual test was not conducted.
- #13 = As per applicant 's requirement, Intertek report SZHH01717892 dated Jul 29, 2022; SZHH01700262 dated Jun 13, 2022 were provided for verification which met the requirements of total Lead content in surface coating, actual test was not conducted.
- #14 = As per applicant 's requirement, Intertek report SZHH01717892 dated Jul 29, 2022; SZHH01700262 dated Jun 13, 2022; SZHH01741034 dated Oct 24, 2022 were provided for verification which met the requirements of Heavy Elements Analysis, actual test was not conducted.

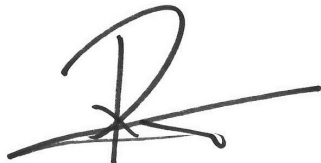


**Test Report**

Number: SZHH01775051

- #15 = As per applicant 's requirement, Intertek report SZHH01741034 dated Oct 24, 2022 was provided for verification which met the requirements of phthalate content, actual test was not conducted.
- #16 = As per applicant 's requirement, Intertek report SZHH01741034 dated Oct 24, 2022 was provided for verification which met the requirements of phthalate content, actual test was not conducted.
- #17 = As per applicant 's requirement, Intertek report SZHH01717892 dated Jul 29, 2022; SZHH01700262 dated Jun 13, 2022 were provided for verification which met the requirements of total Lead content in surface coating, actual test was not conducted.

Authorized by:  
For Intertek Testing Services  
Shenzhen Ltd.



Rachel L. Guo  
General Manager



**Test Report**

Number: SZHH01775051

Tests Conducted

1 Safety Specification for Bunk Beds

Reference standard: ASTM F1427-21<sup>ε1</sup> - Standard Consumer Safety Specification for Bunk Beds.

Note: Lead in paints per 16 CFR 1303 is stated in this standard but not covered in the following test result.

Number of sample tested: One (1) piece.

Overall dimensions: 77-5/8 in W x 41-1/4 in D x 54 in H.

Weight: 77.9 lbs.

Executive summary:

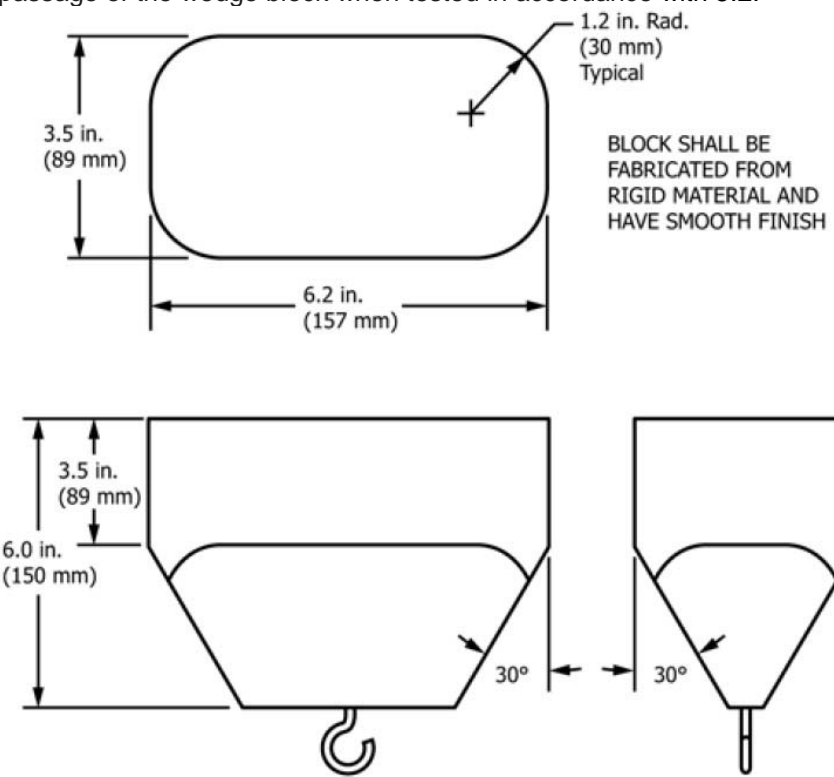
Clause	Testing Items / Requirements	Assessment
1	Scope	
2	Referenced Documents	
3	Terminology	
4	Performance Requirements	
4.1	Vertical Protrusions	
4.1.1	All vertical protrusions along the top inside surfaces of any individual component (including but not limited to bed end structures and guard rails) of the upper bunk shall not extend more than 3/16 in. (4.8 mm) above the upper edge of the adjacent surface. Ladder stiles (uprights) shall not extend more than 3/16 in. (4.8 mm) above the upper edge of the adjacent surface.	P
4.1.2	Any cap used along the top surface of the upper bunk shall not have a vertical protrusion greater than 3/16 in. (4.8 mm) at the edge of the protrusion above the upper edge of the adjacent surface. If the cap is flush with or overhangs the edge of the corner post or other vertical protrusion, the maximum vertical protrusion shall not exceed 3/16 in. (4.8 mm). The cap shall have a maximum height of no more than 20 % of the width or diameter of the cap. At no point shall the cap overhang the post more than 1/16 in. (2 mm). The cap shall fit flush with the top of the corner post.	P
4.2	Fit of Top Bed to Bottom Bed  The bed post shall be designed so that the minimum height of lift to allow horizontal disengagement of the top bed from the bottom bed shall be 1 1/4 in. (32 mm), or a fastening mechanism may be used that will prevent the disengagement of the top bed from the bottom bed.	P



**Test Report**

Number: SZHH01775051

Tests Conducted

Clause	Testing Items / Requirements	Assessment
4.3	<p>Mattress and Foundation Size and Fit (Top Bed)</p> <p>There shall be no gaps between the interior bed structure and the edges of the mattress and foundation that will permit complete passage of the wedge block when tested in accordance with 5.2.</p>  <p><b>FIG. 5 Wedge Block for Tests in Section 5</b></p>	P
4.4	<p>Mattress Size and Fit (Lower Foundation)</p> <p>There shall be no space, between the edge of the manufacturer's recommended mattress and the interior boundary of any component(s) attached to lower bunk (for example, ladders, book shelves, desk), greater than 1.88 in. (48 mm) and smaller than 9 in. (229 mm), when tested in accordance with 5.3.</p>	P



**Test Report**

Number: SZHH01775051

Tests Conducted

Clause	Testing Items / Requirements	Assessment
4.5	Upper and Lower Foundation Support Systems	
4.5.1	The foundation support systems shall confine the horizontal position of the mattress and the foundation and shall prohibit the mattress and foundation from falling when the mattress or foundation is manipulated.	P
4.5.2	In the event cross-members are utilized, a minimum of two per bed are required. If more than two cross-members are utilized, they shall be spaced so that the distance between adjacent cross-members or between the cross-members and the bed end structures will not permit complete passage of the wedge block or will allow complete passage of both the wedge block and a 9 in. (229 mm) diameter rigid sphere when tested in accordance with 5.9.	P
4.5.3	The foundation support system shall not be capable of being dislodged without the release of positive fastening devices or the use of hand tools.	P
4.5.4	The foundation support system shall not fail when tested in accordance with 5.4.	P
4.6	Side Rails	
4.6.1	<i>Bolt-On Side Rails</i> , that attach at their ends or on their side to the bed post, shall be secured at each end by two bolts with a minimum size of 1/4 in. (6.4 mm) diameter or ISO/ANSI size M6. For wood beds, these bolts shall be spaced a minimum of 1 1/2 in. (38 mm) apart on their centers. When the bolts are fully tightened in the assembled bed, no more than 1/4 in. (6.4 mm) of thread shall be exposed.	P
4.6.2	<i>Hook-On Side Rails</i> , securely attached to the bed post. Hook-on attachments shall require an additional action other than an upwards force to disengage.	NA
4.6.3	Side Rail Attachments  There shall be no structural failure of bed side rail fastening systems when tested in accordance with 5.5.	P
4.7	Guardrails	
4.7.1	Two guardrails shall accompany any bed in which the underside of the foundation is over 30 in. (762 mm) from the floor. Guardrails may be separate from or integral with the ladder.	P
4.7.2	Guardrails shall be attached in a manner that requires the intentional release of a fastening device or be so designed that they cannot be removed unless forces are applied sequentially in different directions.	P
4.7.3	The upper edge of the guardrails shall be at least 5 in. (127 mm) above the sleeping surface when a mattress of a thickness that is the maximum specified by the manufacturer's instructions is used on the bed.	P
4.7.4	With no mattress on the bed, there shall be no openings in the rigid bed structure below the lower edge of any opening of the guardrail that would permit complete passage of the wedge block when tested in accordance with 5.6.	P



**Test Report**

Number: SZHH01775051

Tests Conducted

Clause	Testing Items / Requirements	Assessment
4.7.5	A guardrail may terminate before reaching the bed end structure, providing there is no more than 15 in. (381 mm) between either end of the guardrail and the bed end structures in the same plane when measured at a point 5 in. (127 mm) above the sleeping surface as established by the maximum mattress thickness specified by the manufacturer. The second guardrail may terminate before reaching the bed end structure. If this guardrail terminates before reaching the bed end structure, there shall be no more than 0.22 in. (5.6 mm) between either end of the guardrail and the bed end structure when measured horizontally between the bed end structure and the nearest point on the guardrail.	P
4.8	<b>Bed Structure</b>	
4.8.1	The upper edge of the upper bunk end structures for at least 50 % of the distance between the two posts at the head and foot of the upper bunk shall be at least 5 in. (127 mm) above the sleeping surface when a mattress and foundation of the maximum size and thickness specified by the manufacturer's instructional literature is used on the upper bunk.	P
4.8.2	There shall be no openings in the rigid end structures of the upper bunk/bunks that will permit the free passage of the wedge block when tested in accordance with 5.7.1. This requirement shall apply only to those portions of the bed end structure that are above the foundation support system of the upper bunk/bunks.	P
4.8.3	When tested in accordance with 5.7.2, there shall be no openings within the entire boundary of the lower bunk that will permit free passage of the wedge block, unless they are large enough to permit the free passage of a 9 in. (229 mm) diameter rigid sphere. This requirement does not apply to openings that are below the level of the lower bunk foundation support system. This requirement shall apply to that portion of the bed structure that is between the level of the lower bunk foundation support system and the level of the upper bunk foundation support system. Such openings include, but are not limited to, bed end structures, foundation, ladders, desks, or bookshelf components, or a combination thereof, as offered with the bed for purchase and designed to be attached to the bed structure.	P
4.8.4	When tested in accordance with 5.7.2.3 and 5.7.2.4, all portions of the boundary of any opening of the entire lower bunk boundary that permits free passage of a 9 in. (229 mm) diameter rigid sphere also must conform to the neck entrapment requirement.	P
4.9	<b>Ladders</b>	
4.9.1	A lean-on (slanted) or hang-on (vertical) ladder shall be supplied with each bunk bed set or the ladder may be incorporated as part of the bed structure. The ladder may be separate from or integral with the guardrail. The ladder shall be attached in a manner that prevents inadvertent disengagement, repositioning, or tilting while in use.	P



**Test Report**

Number: SZHH01775051

Tests Conducted

Clause	Testing Items / Requirements	Assessment
4.9.2	There shall be no openings between ladder structures that allow complete passage of the wedge block, unless they are large enough to permit the free passage of the 9 in. (229 mm) diameter rigid sphere. The width of the ladder shall be no less than 10 in. (254 mm) measured from the inside of the stiles. Vertical spacing of ladder steps shall be no greater than 12 in. (305 mm) when measured from the floor to the first step or between steps. When bed structures are used as ladders, vertical spacing may be up to 16 in. (407 mm).	P
4.9.3	There shall be no openings between the ladder step and the upper bunk boundary that allow complete passage of the wedge block, unless they are large enough to permit the free passage of the 9 in. (229 mm) diameter rigid sphere.	P
4.9.4	For ladders attached to the side of the lower bed and for which mattress height is above the side rail, there shall be no gaps between the edge of the manufacturers recommended mattress and the interior vertical stile between 1.88 in. (48 mm) and 9 in. (229 mm) when tested in accordance with 5.3.	P
4.10	Metal Beds: Frame and Fastenings  There shall be no separation of any of the attachments of the foundation support system to the end structures of the bed when tested in accordance with 5.8.1.1 and 5.8.2.	P
5	Test Methods	
6	Marking and Labeling	P
7	Instructional Literature	P

Abbreviation: P = Pass; NA = Not Applicable



**Test Report**

Number: SZHH01775051

Tests Conducted

- 2 16 CFR Part 1513-Requirements for Bunk Beds Intended for Use by Children/16 CFR Part 1213-Requirements for Bunk Beds Not Intended for Use by Children

With reference to 16 CFR Part 1513 - Requirements for Bunk Beds & 16 CFR Part 1213 - Safety Standard for Entrapment Hazards in Bunk Beds.

Executive summary:

Clause	Requirements	Assessment
1513.3(a)/1213.3(a)	Guardrails	
(1)	Any bunk bed shall provide at least two guardrails, at least one on each side of the bed, for each bed having the underside of its foundation more than 30 inches (760 mm) from the floor.	P
(2)	One guardrail shall be continuous between each of the bed's end structures. "Continuous" means that any gap between the guardrail and end structure shall not exceed 0.22 inches (5.6 mm) (so as to not cause a finger entrapment hazard for a child).	P
(3)	The other guardrail may terminate before reaching the bed's end structures, providing there is no more than 15 inches (380 mm) between either end of the guardrail and the nearest bed end structures.	P
(4)	For bunk beds designed to have a ladder attached to one side of the bed, the continuous guardrail shall be on the other side of the bed.	P
(5)	Guardrails shall be attached so that they cannot be removed without either intentionally releasing a fastening device or applying forces sequentially in different directions.	P
(6)	The upper edge of the guardrails shall be no less than 5 inches (130 mm) above the top surface of the mattress when a mattress of the maximum thickness specified by the bed manufacturer's instructions is on the bed. This requirement does not prohibit a wall-side guardrail that terminates in a quarter-circle bend and attaches to the side rail of the upper bunk foundation.	P
(7)	With no mattress on the bed, there shall be no openings in the structure between the lower edge of the uppermost member of the guardrail and the underside of the upper bunk's foundation that would permit passage of the wedge block shown in Figure 1 of this part when tested in accordance with the procedure at §1513.4(a)/1213.4(a).	P



**Test Report**

Number: SZHH01775051

Tests Conducted

Clause	Requirements	Assessment
1513.3(b)/1213.3(b)	Bed end structures	
(1)	The upper edge of the upper bunk end structures shall be at least 5 inches (130 mm) above the top surface of the mattress for at least 50 percent of the distance between the two posts at the head and foot of the upper bunk when a mattress and foundation of the maximum thickness specified by the manufacturer's instructions is on the bed.	P
(2)	With no mattress on the bed, there shall be no openings in the end structures above the foundation of the upper bunk that will permit the free passage of the wedge block shown in Figure 1 when tested in accordance with the procedure at §1513.4(b)/1213.4(b).	P
(3)	When tested in accordance with §1513.4(c)/1213.4(c), there shall be no openings in the end structures between the underside of the foundation of the upper bunk and upper side of the foundation of the lower bunk that will permit the free passage of the wedge block shown in Figure 1, unless the openings are also large enough to permit the free passage of a 9-inch (230-mm) diameter rigid sphere.	P
(4)	All portions of the boundary of any opening required by §1513.4(c)(1) and (2)/1213.4(c)(1) and (2) to be probed by the wedge block of Figure 1, and that permits free passage of a 9-inch diameter sphere, must conform to the neck entrapment requirements of §1513.4(c)(3)/1213.4(c)(3).	P
1513.5/1213.5	Marking and labeling	P
1513.6/1213.6	Instructions	P

Abbreviation: P = Pass



**Test Report**

Number: SZHH01775051

Tests Conducted

3 Ladder Strength Test on Metal Bunk Bed

As per the client's requirement, the submitted sample was subjected to the following test.

Number of sample tested: One (1) piece.

Executive summary:

Test Item	Test Method	Requirements / Limits	Result
Ladder Strength Test	In-house Method	Each step withstands an 800 lb load applied on the center of the step, load is distributed across a 3.5 in wide wooden for one minute without sudden structure failure or breakage.	P

Abbreviation: P = Pass

4 Physical and Mechanical Test

Test requirement: U.S. Code of Federal Regulations Title 16 Part 1500.50, the hazards of sharp points, sharp edge and small parts are assessed both before and after applicable use and abuse tests.

	No. of Sample Tested	Sharp Point (1500.48)	Sharp Edge (1500.49)	Small Part* (1501)
As received	1	P	P	P
Impact (1500.53(b))	1	P	P	P
Flexure (1500.53(d))	0	NA	NA	NA
Torque (1500.53(e))	1	P	P	P
Tension (1500.53(f))	1	P	P	P
Compression (1500.53(g))	1	P	P	P

Abbreviation: P = Pass NA= Not Applicable

\* = As requested by the applicant, the hazards of small part was assessed in this report.

\*\*\*\*\*

End of report

The statements of conformity reported have considered the decision rule agreed, namely that Intertek have taken account of measurement uncertainty as calculated by Intertek, and applied according to ILAC-G8/09:2019 (Non-binary acceptance based on guard band  $w = U$ ) except designation from the customer, regulation or test specification. This decision rule only applies to the numeric test results.

The sample(s) and sample information hereto are provided by the client who shall be solely responsible for the authenticity and integrity thereof. The results shown in this report relate only to the sample(s) received and tested. It is not intended to be a recommendation for any particular course of action. Intertek does not accept a duty of care or any other responsibility to any person other than the Client in respect of this report and only accepts liability to the Client insofar as is expressly contained in the terms and conditions governing Intertek's provision of services to you. Intertek makes no warranties or representations either express or implied with respect to this report save as provided for in those terms and conditions. We have aimed to conduct the review on a diligent and careful basis and we do not accept any liability to you for any loss arising out of or in connection with this report, in contract, tort, by statute or otherwise, except in the event of our gross negligence or wilful misconduct. This report shall not be reproduced unless with prior written approval from Intertek.

