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HARDGOODS PRODUCT TEST

轻工产品测试



“心”标准·新生活
Standard for Life

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轻工产品测试 Hardgoods Product Test

轻工业，指主要提供生活消费品和制作手工工具的工业，也被称为消费品。按其所使用的原料不同，轻工产品可分为两大类：(1)以农产品为原料的轻工业，是指直接或间接以农产品为基本原料的轻工业。主要包括食品制造、饮料制造、烟草加工、纺织、缝纫、皮革和毛皮制作、造纸以及印刷等工业；(2)以非农产品为原料的轻工业，是指以工业品为原料的轻工业。主要包括文教体育用品、化学药品制造、合成纤维制造、日用化学制品、日用玻璃制品、日用金属制品、手工工具制造、医疗器械制造、文化和办公用机械制造等工业。

对于第三方检测行业来说，轻工产品主要划分规则是不带电的消费品，其主要分类有：

Hardgoods is also called consumer goods, refers to the industry that produces daily consumer goods and hand tools. Hardgoods can be divided into two categories based on the different raw material used. (1) Light industry using agricultural products as raw material directly or indirectly, mainly include food industry, beverage manufacture, tobacco production, textile and weaving, leather and fur manufacture, paper making and printing, etc.; (2) Light industry using industrial products instead of agricultural products as raw material, mainly include stationery and sporting goods, medicine manufacture, composite textile, daily chemical product, daily glass product, daily metal product, hand tool manufacture, medical care equipment, cultural and office machinery manufacturing, etc..

Hardgoods refer to the non-electrical consumer goods in 3rd party testing and certification organization, mainly include below categories:

一、造纸工业 1.Paper making industry	造纸 Paper making
二、日用机械 2.Daily machinery	自行车、缝制机械、钟表 Bicycle, weaving machine, clock
三、日用硅酸盐 3.Daily silicate	陶瓷、玻璃制品、玻璃炉窑专用耐火材料、搪瓷制品 Ceramic, glass product, refractory material for glass furnace, enamel product
四、日用化学制品 4.Daily chemical product	洗涤用品、化妆品香料香精、牙膏、油墨、蜡制品、火柴、三胶（骨胶、皮胶、明胶）制品 Laundry product, cosmetic product, flavour and perfume industry, tooth paste, paint, wax product, match, bone glue product, hide glue product, gelatin product
五、皮革毛皮及其制品工业 5.Leather and fur product	皮革、羽绒制品，箱包 Leather product, down and feather filled products, luggage case and bag
六、家居及家具产品 6.Home decoration and furniture	家具及室内装饰用品 Home decoration and furniture product
七、文教体育用品 7.Stationery and sporting goods	文教用品、体育用品、健身器材、乐器 Stationery and sporting goods, fitness equipment, musical instrument
八、工艺美术品工业 8.Art craft industry	工艺美术品 Art craft product
九、塑料制品工业 9.Plastic product	塑料制品 Plastic product
十、金属制品工业 10.Metal product	金属制品（五金） Metal product
十一、日用杂品工业 11.Daily groceries industry	日用杂品（木制品及藤棕草制品） Daily groceries (Timber Processing, wood, bamboo, cane, palm fiber and straw Products)
十二、轻工装备工业 12.Light industrial machinery industry	轻工机械（含模具、控制系统） Light industrial machinery (tooling, control system)
十三、玩具工业 13.Toys industry	玩具 Toys
十四、其他工业 14.Other light industry	眼镜、少数民族用品等 Glasses, minority ethnic group daily accessories

沃特检测在多年致力于电子电器行业的检测认证服务取得了不错的成绩，在业内受到广泛的认可。为了拓展业务范围，以服务更加多的行业，沃特检测建立了轻工产品实验室并且申请了部分轻工产品的测试能力认可。

Waltek Service Co.,Ltd has years of experiences in testing and certification especially in electrical and electronic industry and gain well recognition among the industry. For expanding the business scope and serve more enterprises, Waltek Service Co., Ltd. had established Hardgoods lab and applied for the qualification of certain test capability of hardgoods product.

首卷语 Preamble

沃特测试是具有多年产品检测经验的专业第三方检测机构，实验室严格按ISO/IEC17025的要求建立，并取得中国合格评定国家认可委员会(CNAS)认可资质、质量技术监督局实验室资质认定(CMA)的资质、国际电工委员会 (IECEE) 的CB测试实验室资质 (CBTL) 以及国家质检总局进出口商品检验鉴定业务(AQSIQ)许可资质。同时，公司还是香港机电工程署EMSD认可核证团体、美国国家实验室自愿认可程序NVLAP的认可实验室，美国联邦通讯委员会FCC认可实验室、美国消费品安全委员会CPSC认可实验室、美国能源之星Energy Star认可实验室、美国加州能效CEC注册认可实验室，加拿大工业部IC认可实验室，ELI全球高效照明产品认证认可实验室，是UL、Intertek(ETL-SEMKO)、CSA、TÜV Rheinland、TÜV SÜD等国际权威认证机构的战略合作伙伴和数据认可实验室。

公司是中国第三方检测与检验服务的领先机构，其总部位于深圳、在佛山、东莞、中山、苏州、宁波和香港等地分别设立分支机构，拥有产品安全，EMC电磁兼容，性能和能效，化学测试四大领域的测试能力，作为专业性，综合性，公正性的国际化检测机构，我们秉承科学严谨的工作态度，肩负着中国第三方检测行业发展的重任，诚意的协助每一个客户使其产品达到不断更新的国际标准而不懈努力。

Waltek Services Test Group Ltd. is a professional third-party testing and certification organization with multi-year product testing and certification experience, established strictly in accordance with ISO/IEC 17025 requirements, and accredited by CNAS (China National Accreditation Service for Conformity Assessment) AQSIQ, CMA and IECEE for CBTL. Meanwhile, Waltek has got recognition as registration and accreditation laboratory from EMSD (Electrical and Mechanical Services Department), and American Energy star, NVLAP(National Voluntary Laboratory Accreditation Program), FCC(The Federal Communications Commission), CPSC(Consumer Product Safety Commission), CEC(California energy efficiency), IC(Industry Canada) and ELI(Efficient Lighting Initiative). It's the strategic partner and data recognition laboratory of international authoritative organizations, such as UL, Intertek(ETL-SEMKO), CSA, TÜV Rheinland, TÜV SÜD, etc.

Waltek Services Test Group Ltd. is one of the largest and the most comprehensive third party testing organizations in China, our headquarter located in Shenzhen and have branches in Foshan, Dongguan, Zhongshan, Suzhou, Ningbo and Hong Kong. Our test capability covered four large fields: safety test. ElectroMagnetic Compatibility(EMC), reliability and energy performance, Chemical test. As a professional, comprehensive, justice international test organization, we still keep the scientific and rigorous work attitude to help each client satisfy the international standards and assist their product enter into globe market smoothly.



箱包产品测试服务 Luggage Product Test

- 化学测试
- GB 20400-2006 《皮革和毛皮有害物质限量》
- GB 19340-2014 《鞋和箱包用胶黏剂》
- 箱包产品物理测试
- QB/T 2155-2010 《旅行箱包》
- QB/T 1333-2010 《手提包》
- QB/T 2858-2007 《学生书袋》
- QB/T 2277-1996 《公事包》
- QB/T 1585-1992 《家用衣箱》
- QB/T 1332-1991 《公文箱》
- 零部件物理测试和纺织品皮革测试
- Chemical test
- GB 20400-2006 Hazardous substance limit of leather and fur product
- GB 19340-2014 Adhesive used in shoes and luggage case and bag
- Luggage product physical test
- QB/T 2155-2010 Luggage case for travel
- QB/T 1333-2010 Hand bag and backpack
- QB/T 2858-2007 Students book bag
- QB/T 2277-1996 Briefcase
- QB/T 1585-1992 Household suitcase
- QB/T 1332-1991 Attache case
- Component physical test and textile leather test



材料 Material	项目 Test Item	限制 Limit	要求 Requirement	测试方法 Test met
皮革、再生革、织物 类材料Leather,PU, textile	可分解有害芳香胺染料 Decomposive toxic aromatic amine dyes	≤30 mg/kg (如果4-氨基联苯和(或)2-萘胺的含量超过 30 mg/kg,且没有其他的证据,以现有的科学知识,尚不能断定使用了禁用偶氮染料) (If the content of tetraamino biphenyl or naphthylamine exceeds 30mg/kg,and there is no other evidence to prove,we cannot give the conclusion that hazardous azo dyes is used according to the existing science technology.)	GB 20400-2006	GB/T 19942
	游离甲醛 Free formaldehyde	≤300 mg/kg	GB 20400-2006	GB/T 19941

材料 Material	项目 Test Item	限制 Limit	要求 Requirement	测试方法 Test met
箱包用胶黏剂有害物质限量 Hazardous substance limit of adhesice used in shoes and luggage case	苯 Benzene	≤5.0 g/kg	GB 19340-2014	GB 18583
	甲苯+二甲苯 Toluene+xylene	≤200 g/kg		GB 18583
	游离甲苯二异氰酸酯 Free toluene diisocyanate	≤10.0 g/kg		GB 18583
	正己烷 n-hexane	≤150 g/kg		GB 19340 附录B GB 19340 Annex B
	卤代烃 halohydricarbon	≤50.0 g/kg		GB 19340 附录C GB 19340 Annex C
	二氯甲烷 methylene chloride			
	1,2-二氯乙烷 1,2-ethylene dichloride			
	1,1,2-三氯乙烷 1,,12-methylene chloride			
	三氯乙烯 Trichloroethylene	≤750 g/L		GB 18583
总挥发性有机物 TVOC				

QB/T 2155-2010 物理测试/QB/T 2155-2010 Physical test

测试项目 Test item	测试要求 Test requirement
拉杆耐疲劳性能 (QB/T 2919) Trolley fatigue test (QB/T 2919)	合格品拉合3000次,优等品4000次。测试过程中,每1000次间歇5分钟。 3000 cycles for average product, 4000 cycles for premium product. Every 1000 cycles pause for 5 mins.
行走性能 (QB/T 2920) Wheel running test (QB/T 2920)	合格品测试8km,优等品12km。速度4km/h,每2km间歇10分钟。 8 km for average product, 12 km for premium product. Speed 4 km/h, every 2 km pause for 10 mins.
振荡冲击性能 (QB/T 2922) Handle jerking test (QB/T 2922)	拉杆箱:正提把、侧提把各400次。拉杆合格品300次,优等品400次。 手提包:双背带、双提把各400次,单背带、单提把各250次,侧提带150次。 Trolley case: 400 cycles for top and side handle. Trolley should meet 300 cycles for average product, 400 cycles for premium product. Backpack: 400 cycles for double straps and double handles, 250 cycles for single strap and single handle, 150 cycles for side handle.
耐冲击性能 (QB/T 2921) Case drop test (QB/T 2921)	6个面各跌落1次,高度900mm,8个角12条边各跌落1次,高度600mm。 All 6 surface, the height is 900 mm. All 8 corners and 12 sides, the height is 600 mm.
箱面耐落球冲击性能 (QB/T 2918) Hard case surface drop hummer impact test (QB/T 2918)	6个面各跌落1次,高度900mm,8个角12条边各跌落1次,高度600mm。 Keep sample in the ambient temperature of 18~25° C for 1 hour, and use the spherical hummer of the weight (4kg±10g for average product, 5kg±10g for premium product) release from height 700 mm on the middle point of the surface of the hard case. Ensure the impact is for just one time.
箱面耐落球冲击性能 (QB/T 2918) Hard case tumbling drum test (QB/T 4116)	滚筒转动速度2r/min,转动次数25圈。 Tumbling drum rolling speed is 2r/min, 25 cycles.

零部件物理测试和纺织品皮革测试/Components physical test and textile leather test

- ◆ 五金配件耐腐蚀性QB/T 3826: 镀铬件测试12h, 镀锌件、镀锌件测试6h, 优等品表面无腐蚀, 合格品表面腐蚀面积不大于2mm²
- ◆ 纺织品物理性能:
拉链平拉强力(QB/T2171, 2172, 2173)
缝合强度 ≥196N, 面层材料: ≥45kg/5cm, 里料: ≥36kg/5cm, 装饰物: ≥20kg/5cm。
箱锁(保密性、灵活性、耐用度): 中端、高端15000~20000次, 活动部件5000次, 低端不要求。
纺织面料起球试验 (GB/T4802.2)
摩擦色牢度(皮革 QB/T 2537, 纺织品 QB/T 3920): 干擦 ≥4级, 湿擦 ≥3级。

- ◆ Metal parts anti-corrosion test QB/T 3826: 12 h for chrome plated parts, 6 h for nickel plated and zinc plated product. The corrosion area should not be over 2mm² for average product, no corrosion is allowed for premium product.

- ◆ Textile physical test:
Zipper pulling strength (QB/T2171, 2172, 2173)
Seam strength ≥196N, shell fabric: ≥45kg/5cm, lining: ≥36kg/5cm, decoration: ≥20kg/5cm。

- Case lock (security, flexibility, durability: 15000~20000 cycles for middle and high grade product, 5000 cycles for moving parts, no requirement for low grade product.

- Textile fabric pilling test (GB/T4802.2)
Color fastness to rubbing (leather QB/T 2537, textile QB/T 3920): dry rubbing ≥ grade 4, wet rubbing ≥ grade 3.



其他轻工产品测试服务/Other hardgoods product test

家具测试 Furniture test

欧盟室内家具测试

- EN 12520: 2015 家用椅子强度,疲劳和安全性要求
- EN 12521: 2015 家用桌子机械强度和结构安全测试
- EN 14749:2016 家用与厨房用储存式家具强度和结构安全测试

欧盟办公家具测试

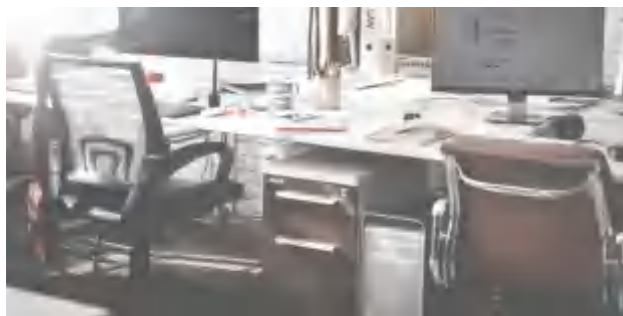
- EN 1335-1 & 2 & 3:2009 办公椅 - 安全要求和测试方法
- EN 527-1 & 2 & 3:2011 工作台及桌子 - 第二部分: 机械安全要求和第三部分: 稳定性及结构的机械强度的测试方法
- EN 14073-2 & 3 & 4:2004 办公家具 - 储存家具 - 要求及测试方法
- EN 1023-2 & 3:2000 办公家具 - 屏风 - 机械安全要求和测试方法

美国办公家具测试

- ANSI/BIFMA X5.1 2011 通用办公椅安全和结构强度测试
- ANSI/BIFMA X5.5 2014 办公桌台安全和结构强度测试
- ANSI/BIFMA X5.3 2007 文件柜机械安全和结构强度测试
- ANSI/BIFMA X5.4 2012 公共场所用椅测试要求
- ANSI/BIFMA X5.6 2016 屏风系统测试

户外家具测试

- EN 581-1&2:2015 户外家具 椅子机械安全要求和测试方法
- EN 581-1&3:2007 户外家具 桌子机械安全要求和测试方法



European standards for domestic furniture

- EN 12520: 2015 Strength, durability and safety - Requirements for domestic seating
- EN 12521: 2015 Strength, durability and safety - Requirements for domestic tables
- EN 14749:2016 Domestic and kitchen storage units and worktops - Safety requirements and test methods

European standards for office furniture

- EN 1335-1 & 2 & 3:2009 Office furniture - office work chair - safety requirements and method
- EN 527-1 & 2 & 3:2011 Office Furniture - Work Tables and Desks - Mechanical safety requirements and Methods of test for the determination of the stability and the mechanical strength of the structure
- EN 14073-2 & 3 & 4:2004 Office furniture - Storage furniture - safety requirements and test methods for the determination of stability and strength of the structure, strength and durability of moving parts.
- EN 1023-2 & 3:2000 Office furniture - screens Mechanical Safety Requirements and test methods

US standard for office furniture

- ANSI/BIFMA X5.1 2011 General Purpose Office Chairs - Tests
- ANSI/BIFMA X5.5 2014 Desk/Table Products - Tests
- ANSI/BIFMA X5.3 2007 Vertical Files - Tests
- ANSI/BIFMA X5.4 2012 Lounge and Public Seating - Tests
- ANSI/BIFMA X5.6 2016 Panel Systems - Tests

European standard for outdoor furniture

- EN 581-1&2:2015 Outdoor furniture - Seating and tables for camping, domestic and contract use - Mechanical safety requirements and test methods for seating
- EN 581-1&3:2007 Outdoor furniture - seating and tables for camping, domestic and contract use - mechanical safety requirement and test methods for tables

蜡烛和烛台, 油灯

- ASTM F2417-11 蜡烛的安全要求 (美标)
- EN 15493:2007 蜡烛的安全要求 (欧标)
- ASTM F2058-07(Reapproved 2014) 家用蜡烛的警告标语要求 (美标)
- EN 15494:2007 蜡烛的警告标语要求 (欧标)
- EN 15426:2007 蜡烛烟灰生成规范
- ASTM F2601-13 蜡烛配件的防火标准要求 (美标)
- ASTM F2179-14 用作蜡烛台的淬火碳酸硅容器的标准规范 (美标)
- EN 14059:2002 装饰油灯 - 安全要求及测试方法



Candle and candle holder, lantern

- ASTM F2417-11 US Standard Specification for Fire Safety for Candles
- EN 15493:2007 Candles - Specification of Fire Safety
- ASTM F2058-07(Reapproved 2014) US Standard Specification for Candle Fire Safety Labeling
- EN 15494:2007 Candles - Product Safety Labels and Warnings
- EN 15426:2007 Specification for Sooting Behavior
- ASTM F2601-13 US Standard Specification for Fire Safety for Candles Accessories
- ASTM F2179-14 US Standard specification for Annealed Soda-Lime-Silicate glass containers that are produced for use as candle container
- EN 14059:2002 Decorative oil lamps - Safety requirements and test method

珠宝 Jewelry

- ASTM F2999-14 Standard Consumer Safety Specification for Adult Jewelry

