

**SHOWVEN**<sup>®</sup>  
PASSION FOR INNOVATION

SAFETY OF  
SPARKULAR

**SHOWVEN TECHNOLOGIES CO., LTD**

BUILDING B1, CHANGSHA E CENTER, NO.18 XIANGTAI ROAD, LIUYANG,  
HUNAN 410300, CHINA

[WWW.SHOWVEN.CN](http://WWW.SHOWVEN.CN)

[INFO@SHOWVEN.CN](mailto:INFO@SHOWVEN.CN)

## WHAT IS SPARKULAR

SPARKULAR is original innovation products introduced by SHOWVEN in 2016, it is the first cold spark fountain machine in special effects industry. It generates a fantastic, non-hazardous sparks effect that looks like traditional stage fountain.

The ingenious design for SPARKULAR is that the effect simply created by using a SPARKULAR machine and granulated alloy (HC8200), without use any hazardous chemicals during the whole process. And the sparks generated by physical heating (electromagnetic heating) while without any internal ignition, and blow out from nozzle with a built-in blower.

SHOWVEN obtained 7 PCT patents globally and 29 patents in China on SPARKULAR machine.

SPARKULAR wins the BEST DEBUT PRODUCT in 2016 LDI show in Las Vegas, USA.

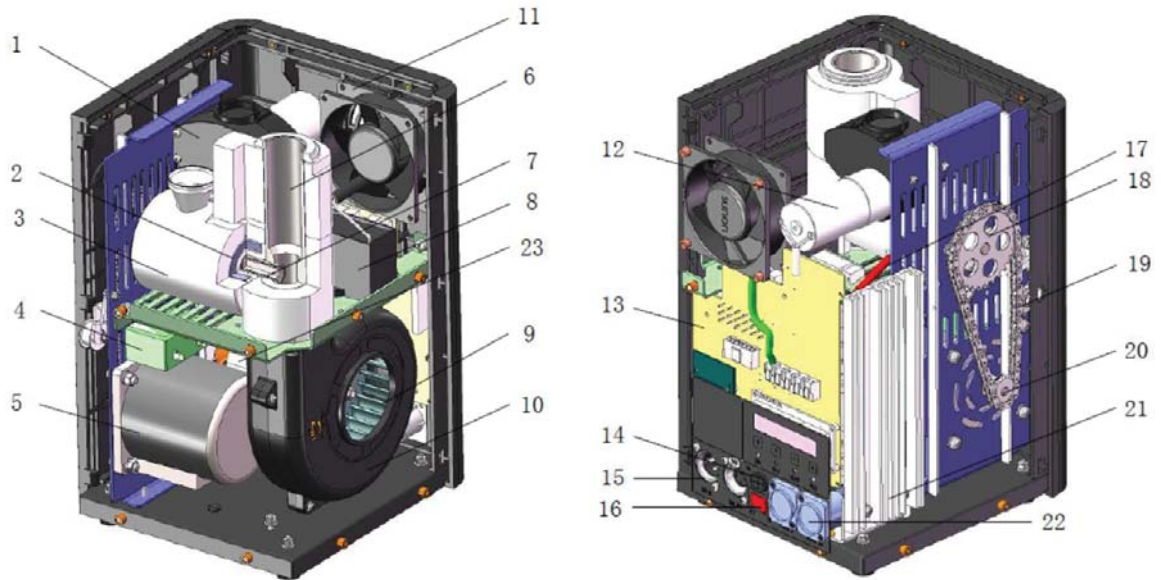


SPARKULAR



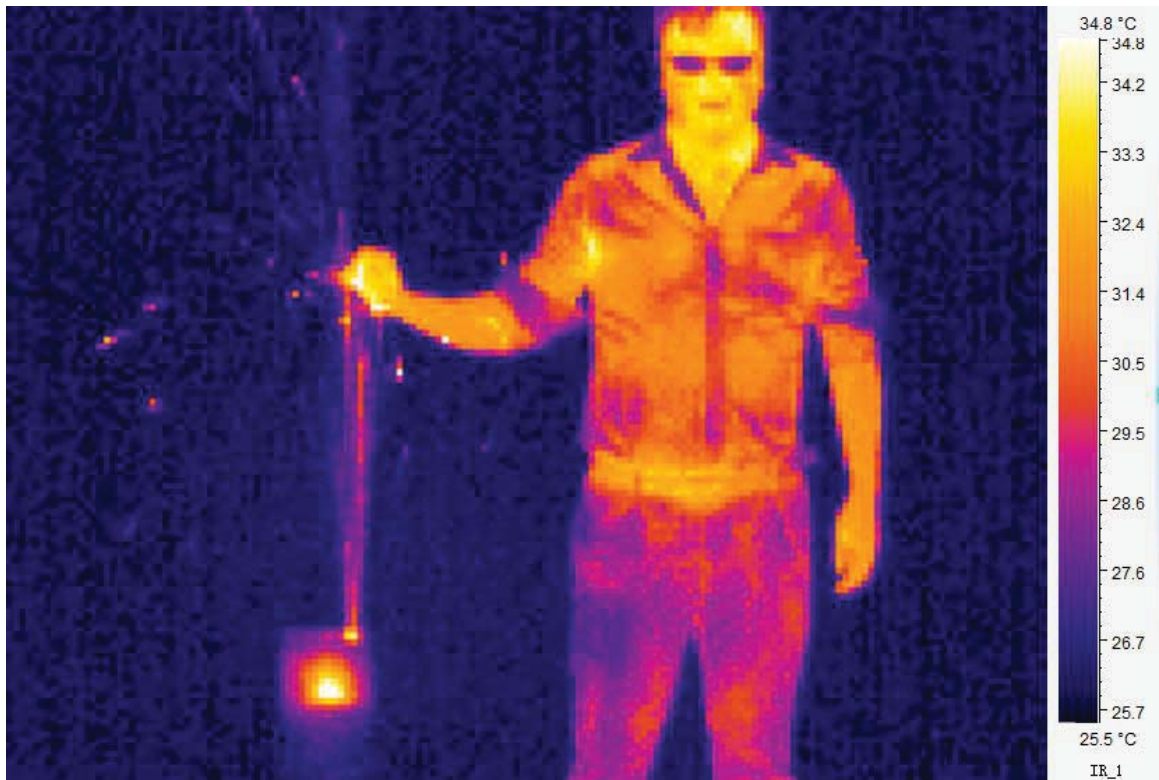
HC8200

## SPARKULAR STRUCTURE



1	Hopper	2	Heating coil	3	Thermo protective coating
4	Motor capacitor	5	Motor	6	Nozzle
7	Shaft	8	Motor capacitor	9	Impeller
10	Blower shell	11	Heat dissipating fan	12	DC Motor
13	Main board	14	Fuse	15	DMX socket
16	Power switch	17	Temp. sensor	18	Driven wheel
19	Chain	20	Drive wheel	21	Heating PCB
22	Power socket	23	Motor		

# THERMOGRAPHER TESTING



# CERTIFICATES FOR SPARKULAR

As electronic device, SPARKULAR pass FCC, CE LVD etc test, test report shows below:



## VERIFICATION OF COMPLIANCE

No.: LVD SZES1604001603IT  
Applicant: Liuyang Xiaowen Electronic Technologies Co., Ltd.  
Building B1, Changsha E-Center, No.18 Xiangtai Road, Liuyang  
Economic Development Zone, Hunan, China  
Manufacturer: Same as applicant  
Product Name: Sparkular  
Product Description: --  
Model No.: BTxx (xx = 00-99)  
Rating: 200 - 240 V; 50 / 60 Hz; 1,8 A  
Protection against Electric Shock: Class I  
Additional Information: --  
Sufficient samples of the product have been tested and found to be in conformity with  
Test Standard: EN 60950-1: 2006 + A11: 2009 + A1: 2010 + A12:  
2011 + A2: 2013  
as shown in the  
Test Report Number(s): SZES160400160301

This Verification of Compliance has been granted to the applicant based on the results of tests, performed by Laboratory of SGS-CSTC Standards Technical Services Co., Ltd. on sample of the above-mentioned product in accordance with the provisions of the relevant harmonized standards under the Low Voltage Directive 2014/35/EU. The CE marking as shown below can be affixed, under the responsibility of the manufacturer, after completion of an EC Declaration of Conformity and compliance with all relevant EC Directives. The affixing of the CE marking presumes in addition that the conditions in annexes III and IV of the Directive are fulfilled.

  
  
Walter Zheng  
Laboratory Manager  
SGS-CSTC



2016-11-04

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**SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch**

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan  
District Shenzhen, China 518057

Telephone: +86 (0) 755 2601 2053  
Fax: +86 (0) 755 2671 0594  
Email: ee.shenzhen@sgs.com

Report No.: SZEM160400289501  
Page: 1 of 26

## TEST REPORT

**Application No.:** SZEM1604002895IT  
**Applicant:** Liuyang Xiaowen Electronic Technologies Co.,Ltd  
**Address of Applicant:** Building B1, Changsha E Center, No.18, Xiangtai Road, Liuyang Economic Development Zone, Changsha City, Hunan Province, China.  
**Manufacturer:** Liuyang Xiaowen Electronic Technologies Co.,Ltd  
**Address of Manufacturer:** Building B1, Changsha E Center, No.18, Xiangtai Road, Liuyang Economic Development Zone, Changsha City, Hunan Province, China.  
**Factory:** Liuyang Xiaowen Electronic Technologies Co.,Ltd  
**Address of Factory:** Building B1, Changsha E Center, No.18, Xiangtai Road, Liuyang Economic Development Zone, Changsha City, Hunan Province, China.

**Equipment Under Test (EUT):**

**EUT Name:** Sparkular  
**Model No.:** BT02  
**Trade Mark:** Sparkular  
**Standards:** 47 CFR PART 15,Subpart B:2015  
**Date of Receipt:** 2016-04-29  
**Date of Test:** 2016-05-31  
**Date of Issue:** 2016-06-28

<b>Test Result :</b>	<b>Pass*</b>
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\* In the configuration tested, the EUT complied with the standards specified above.



Jack Zhang  
EMC Laboratory Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. All test results in this report can be traceable to National or International Standards.

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CERTIFICATES FOR HC8200



Test Report

No. CANEC1608576301

Date: 30 Jun 2016

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LIUYANG XIAOWEN ELECTRONIC TECHNOLOGIES CO., LTD.

BUILDING B1, CHANGSHA E CENTER, NO.18, XIANGTAI ROAD, LIUYANG ECONOMIC DEVELOPMENT ZONE, CHANGSHA CITY, HUNAN PROVINCE CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as : Composite TI for stage effect

SGS Job No. : CP16-028145 - SZ
Model No. : HC8200
Date of Sample Received : 12 May 2016
Testing Period : 12 May 2016 - 18 May 2016
Test Requested : Selected test(s) as requested by client.
Test Method : Please refer to next page(s).
Test Results : Please refer to next page(s).
Conclusion : Based on the performed tests on submitted sample(s), the results of Cadmium, Lead, Mercury, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) do not exceed the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

Zmguan
Zm guan
Approved Signatory



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Attention: To check the authenticity of testing (inspection report & certificate, please contact us at telephone: (86-755) 8367 1443, or email: CH.Docscheck@sgs.com
156 Kefu Road, Saitan Park, Guangzhou Economic & Technology Development District, Guangzhou, China 510663 t (86-20) 82155555 f (86-20) 82075113 www.sgs.com.cn
中国·广州·经济技术开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 f (86-20) 82075113 s sgs.china@sgs.com

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中国认可  
检验  
INSPECTION  
CNAS IB0078



Strategic  
Partner

# 航空运输条件鉴别报告书

## Identification and Classification Report for Air Transport of Goods

报告编号: PEKBJ20180111811BH0012

Issued No.:

签发日期:

2018.05.09

Issued Date:

委托单位: 浏阳市孝文电子科技有限公司

Applicant: Showven Technologies Co., Ltd

物品名称: 舞美复合钛 HC8200

Name of Goods: Composite Ti for stage effect HC8200

北京迪捷姆空运技术开发有限公司


Beijing DGM Air Transport Technology Co.Ltd





北京迪捷航空技术开发有限公司

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项目编号 Item No.		PEKBJ20180111811		
物品名称 Name of Goods	中文 Chinese	舞美复合钛 HC8200		
	英文 English	Composite Ti for stage effect HC8200		
鉴别结论 Conclusions		<p>根据IATA的“Dangerous Goods Regulations”的标准进行燃烧试验，十分钟不能遍及全长，不属于易燃固体。                  该样品与多种还原剂不发生反应，不属5.1项氧化剂。                  该样品与锌、铝等金属不反应，对皮肤无伤害，不属腐蚀品。                  根据有关资料和使用经验分析，该物质不会引起人员急性中毒，不属毒害品。                  该样品无刺激性、麻醉性，不属第9类危险物品。该样品无其他危险性。                  按联合国测试和标准手册试验，本品不属于4.2项危险品。                  按联合国测试和标准手册试验，本品不属于4.3项危险品。                  根据DGP特殊规定A3，本品不受限制，即“NOT RESTRICTED, AS PER SPECIAL PROVISION A3”。</p> <p>In ten minutes, this zone of reaction observed during the test cannot spread over the whole of the sample, when heated in igniting experiment according to the criteria of IATA Dangerous Goods Regulations, so it does not belong to flammable solids.                  The sample does not react with many deoxidizing materials, so it does not belong to oxidizer of division 5.1.                  The sample does not react with metals such as Zn or Al and has no harm to skin, so it does not belong to corrosives.                  According to the experience and the relevant materials, the substance does not cause acute poisoning to human. It does not belong to toxic substance.                  The sample does not have narcotic, noxious, irritating and other characters to cause extreme annoyance or discomfort to crewmembers and passengers, so it does not belong to miscellaneous dangerous goods.                  The test has been performed According to the UN manual of Tests and criteria and this substance does not belong to dangerous goods of division 4.2.                  The test has been performed According to the UN manual of Tests and criteria and this substance does not belong to dangerous goods of division 4.3.                  According to IATA DGP, this product can be classified as “NOT RESTRICTED, AS PER SPECIAL PROVISION A3”.</p>		
建议运输条件 Suggestion for Transport Condition	UN/ID 编号 UN/ID No.	运输专用名称 Proper Shipping Name		类或项 Class or Div. (次要危险性) (Subsidiary Risk)
	/	/		/
	包装说明 Packing Inst.	客货机 Passenger and Cargo Aircraft	/	包装等级 Packing Group
		仅限货机 Cargo Aircraft only	/	/
	注意事项 Remarks	单一容器或包装件货物数量不得超过450L。 The net quantity per each receptacle or packaging can't exceed 450L.		
主检员 Prepared by:	孙育	审核人 Checked by:	倪玉春	批准人 Approved by: 杨明 报告单位(盖章) Stamp 

制单: 朱宝辉



海运  
By Sea

## 货物运输条件鉴别报告书

Identification and Classification Report for Transport of Goods

非限制性  
(Not subject to these Regulations)

报告编号: SEKBJ20180111024BH0003  
Issued No: \_\_\_\_\_

签发日期: 2018.05.09  
Issued Date: \_\_\_\_\_

委托单位: 浏阳市孝文电子科技有限公司  
Applicant: Showven Technologies Co., Ltd  
\_\_\_\_\_

物品名称: 舞美复合钛 HC8200  
Name of Goods: Composite Ti for stage effect HC8200  
\_\_\_\_\_

北京迪捷姆空运技术开发有限公司

Beijing DGM Air Transport Technology Co.Ltd

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北京迪捷姆空运技术开发有限公司

项目编号 Item No.	SEKBJ20180111024	
物品名称 Name of Goods	中文名称 Name of Chinese	群美复合钛 HC8200
	英文名称 Name of English	Composite Ti for stage effect HC8200
鉴别项目名称 Item	检验结果 Inspection Result	
爆炸危险性 Hazard of Explosion	该物质不属于爆炸品。 The goods do not meet the definitions and criteria for explosives.	
易燃危险性 Hazard of Flammability	该物质不属于易燃固体。 The goods do not meet the definitions and criteria for flammable solids.	
氧化危险性 Hazard of Oxidizing	该物质不属于氧化性物质和有机过氧化物。 The goods do not meet the definitions and criteria for oxidizing substances and organic peroxides.	
毒害危险性 Hazard of Toxicity & Infection	该物质不属于毒性物质和感染性物质。 The goods do not meet the definitions and criteria for toxic and infectious substances.	
放射性危险性 Hazard of Radiation	该物质不属于放射性物质。 The goods do not meet the definitions and criteria for radioactive material.	
腐蚀性危险性 Hazards of Corrosion	该物质不属第8类腐蚀性物质。 The goods do not meet the definitions and criteria for corrosives of Class 8.	
其他危险性 Other Hazards	该物质无其他危险性。 The goods present no other dangerous properties.	
注意事项 Remarks	单一容器或包装件货物数量不得超过450L。 The net quantity per each receptacle or packaging can't exceed 450L.	

出单：朱宝辉

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## SPARKULAR SAFETY DESIGN

Safety is always the first priority when we design the SPARKULAR, for better effects and safety we designed an original control system HOST CONTROLLER, besides the SPARKULAR itself also equipped with multiply built-in safety protocols:

**DMX Control:** SPARKULAR controlled by DMX signal, operator can adjust height/duration easily.

**Host Controller:** SHOWVEN designed original host controller to monitor the working status of SPARKULAR in remote, The information such as temp. error etc will send back to host controller in real time.

**Emergency Stop:** Operator can stop SPARKULAR on host controller or DMX console whenever it needed.

**Tip Over Protection:** when machine slant more than 45 degree, it will activated, and SPARKULAR stop working automatically.

**Over Heating Protein:** when SPARKULAR core temperature exceed its limit, machine will stop work automatically.

**Chassis Heating Protection:** when heat dissipating not good. SPARKULAR chassis temperature goes over 65 degree, machine will stop work automatically.

**Motor Electrical Protection:** when the current is too high, the motor will stop working.

TRADE SHOWS EXPOSURE



**SHOWVEN<sup>®</sup>**

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