浙 江 联 和 电 子 有 限 公 司

ZHEJIANG LIANHE ELECTRONICS CO.,LTD.

承　认　书

SPECIFCATION FOR APPROVAL

客 户 名 称 CUSTOMER	
品 名 DESCRIPTION	PS-110型压接式条形连接器
料 号 CUSERTOMER PART NO	D2801
日 期 DATE	

客 户 确 认（APPROVED SIGNATURES）

核准（APPROVAL）	工程（ENGINEERING）	品管（QC）
承认结果：	☐ 承认　☐ 不承认	☐ 重新送样

浙江联和电子有限公司
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核准（APPROVAL）	确认（CHECK）	制作（PREPARE）

PS-110型料号说明 Description of item number

壳体料号说明 HOUSING

D 2801 - S H B 02 X2 - N* - * - ** - ** - ** - **

A: Wire to Board Connectors
B: Board-in Connectors
C: Wire to Wire Connectors
D: Hard Splices Connectors
F: FFC/FPC Connectors
I : IDC

系列号 Series Number

特征类别(默认空)
Feature Category: S=锁片型

产品类别 H=壳体 Housing
P=密封件 Water Proofing
Product Category: F=配件 Fitting

同类别多型号序号 (默认空)
Same Series Different Type: B~ZZ

单列极数 The Pin Number of Single Row: 01~**

多列列数 The Pin Number of Several Row: X2~X* (无则空)

M为堵孔，*为堵孔序号(例M1.2.5)(无则空)

壳体材料
Housing Material:
1=PA66
2=PA66灼热丝-G
3=PA46
4=PA6T
5=PA9T
6=PBT
7=PPO
8=LCP
9=U=UL
10=PC
11=PA66无卤灼热丝
12=PA66高灼热丝B
13=PA66增强

壳体材料特性
Housing Material Specialty:
V2 UL阻燃等级标准(默认不注明)
V0 UL阻燃等级标准
Z=灼热丝是按照(IEC60695/GB/T5169)标准,
符合GWIT750℃,GWFI960℃
ZG=灼热丝加玻纤

壳体颜色
Housing Color:
OR=橙色 Orange
P=粉色 Pink
R=红色 Red
VI=紫色 Violet
Y=黄色 Yellow
GY=灰色 Gray
BK=黑色 Black
G=绿色 Green
BL=蓝色 Blue
BR=棕色 Brown
TR=透明白 Transparent
W=白色 White
EC=米白 ECRU
TG=透明绿 Transparent Green
壳体材料2/3/4/5/8/12默认米色
壳体材料7默认黑色
壳体材料1/6/9/10/11默认白色
壳体材料13默认透明
(默认可为空)

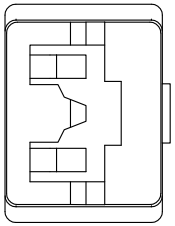
无卤标识
无卤产品加HF,有卤默认为空

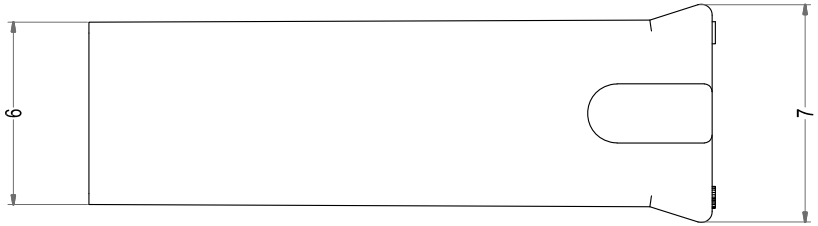
客户专用代码
Customer Special Code: 表示和常规件不同,用来代表某个客户

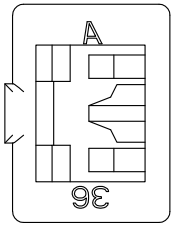
备注:*部分内容只在产品标签中体现! 其他特殊要求位置不固定

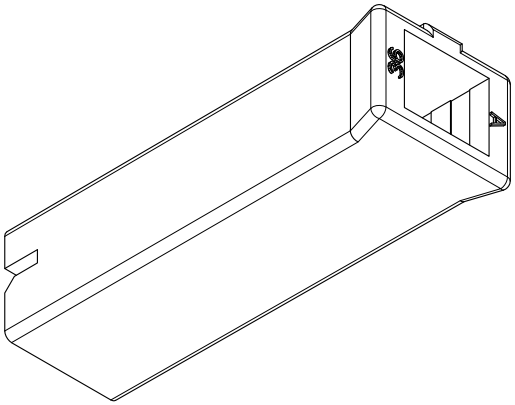
连接器承认图面

REV	DESCRIPTION	DATE
A/0	原 始 版 本	E
A/1	修 订 版 本	









Poles	Part No.	
1	D2801-H01	PS-110-1Y

序号	图 号	名 称	材 料	数量	附 注
1		Housing 胶壳	PA66(UL94V-0/V-2)	1	White（白色）

未 注 公 差

X.° ±3° X.X° ±0.5°

LHE® 浙江联和电子有限公司
ZHEJIANG LIANHE ELECTRONICS CO.,LTD

>0-3	>3-18	>18-50	>50-120	单位	比例	Design Units	SIZE	页码
±0.12	±0.15	±0.3	±0.5	MM Only	——	METRIC	A4	

制 作	审 核	批 准	材 料	图 号		Part No.
			见图解	品 名	PS-110-1Y	

旧底图总号
底图总号
签 字
日 期

产品规格书

PRODUCT SPECIFICAION

版本号
Version Number: A

产品编码
Part Number: D2801

■ 规格 Specifications

◆1、额定电流 Current rating: AWG #18 7.0A AC,DC
AWG #20 4.0A AC,DC
AWG #22 3.0A AC,DC
AWG #24 2.5A AC,DC
AWG #26 1.5A AC,DC

◆2、额定电压 Voltage rating: 250V AC,DC

◆3、温度范围 Temperature range: -40℃ to +105℃

◆4、接触电阻 Contact resistance: 初始(Initial)≤5mΩ
环境测试后(After environmental testing)≤10mΩ

◆5、绝缘电阻 Insulation resistance: ≥1000MΩ

◆6、耐电压 Withstand voltage: V AC/minute

◆7、适用线规 Applicable wire: AWG #26 to #18

产品性能测试 Performance test			
	项目 Item	测试条件 Test Condition	规格要求 Requirement
1	外观 Appearance	目测 Visual by eye 视力 Light: ＞1.0 照明 Lamp: 200～300Lx 目测距离 Space: 0.3～0.5m	连接器表面清洁、无破损等缺陷，印字及标志清晰。 Connector clearing surface without discolor,broken defects,indistinct words and mark is acceptable.
2	结构尺寸 Structure size	带表卡尺测量 Measurement with gauge caliper	按相应图纸文件执行 Execute According to the corresponding drawings and documents
3	互换性 Exchangeability	各产品相互进行插拔试验 Insertion and pull-out test of each product	各产品相互之间配合应良好
4	插入与拔出力 Insertion and Withdrawal Force	相配的接触件以1mm/s～5mm/s的速度沿接插器轴线方向插入和拔出。 Insertion and withdraw contacts at the speed rate of 1mm/s～5mm/s.	Single PIN 插入力 Insertion:≤35N 拔出力 Withdrawal:≥25N
5	壳体/端子固定力 Terminal/Housing Retention Force	固定连接器或测力计，在连接器轴线方向施加规定的拉力;速度不大于25mm/min。 Apply axial pull out force at the speed rate of not more 25mm/min on the pin assembled in the housing.	≥25N

产品规格书

PRODUCT SPECIFICAION

版本号 Version Number: A

产品编码 Part Number: D2801

产品性能测试 Performance test			
	项目 Item	测试条件 Test Condition	规格要求 Requirement
6	针的固定力 Pin Retention Force	固定连接器或测力计，在连接器轴线方向对针施加规定的推力;速度不大于25mm/min。 Apply axial push out force at the speed rate of not more 25mm/minute on the terminal assembled in the base.	≥10N
7	可焊性 Solderability	把测试样品需要焊接的部位浸入焊锡炉中(锡炉温度240℃±5℃)2±0.5秒钟。 Soldering time: 2±0.5 second Solder Temperature:240℃±5℃	上锡率≥90% 90% of immersed area must show no voids,pin holes
8	压着部位抗张强度 Crimping Pull Out Force	在试验装置夹头中固定测试样品，在连接的轴线方向施加张力;速度不大于25mm/min。 Fix the crimped terminal,apply axial pull out force on the wire at the speed rate of not more 25mm/min.	AWG #22：≥30N AWG #24：≥20N AWG #26：≥15N AWG #28：≥10N AWG #30：≥8N
9	接触电阻 Contact Resistance	插合连接器,用小功率电路进行测试。 Mate connectors,measure by dry circuit.	1.初始(Initial)≤10mΩ 2.环境测试后(After testing)≤20mΩ
10	绝缘电阻 Insulation Resistance	在相邻接触件之间或地线之间，用500V DC电压进行测试。 Apply 500V DC between adjacent terminal or ground.	≥1000MΩ
11	耐电压 Dielectric Strength	相邻接触件之间或地线之间施加50Hz 1000V AC(有效值),漏电流1mA的电压作用，时间1分钟。 Mate connectors, apply 1000V AC for 1 minute between adjacent terminal or ground.	无击穿和飞弧现象 No Breakdown
12	机械寿命 Repeated insertion/ withdrawal	以每分钟插拔10次的速率，插拔50次。 When mated up to 50 cycles repeatedly by the rate of 10 cycles per minute.	1.接触电阻 Contact Resistance：≤20mΩ 2.拔出力 Withdrawal force：≥0.5N

产品规格书

PRODUCT SPECIFICAION

版本号 Version Number: A

产品编码 Part Number: D2801

产品性能测试 Performance test			
	项目 Item	测试条件 Test Condition	规格要求 Requirement
13	温度循环 Temperature cycle	把测试样品放入高低温试验箱中,按下列步骤调试温度: a)在-25℃±2℃的恒温条件下放置0.5小时; b)在85℃±2℃的恒温条件下放置0.5小时; 从a)到b)为一个循环周期,共进行5个循环。恢复2h后检查。状态转换时间不多于0.5小时。 Mated connectors are exposed to 5 cycles of: a)-25℃±2℃ 0.5hour b)+85℃±2℃ 0.5hour	1.外观 Appearance: 无损伤 No Damage 2.接触电阻 LLCR:≤10mΩ
14	恒定湿热 Humidity	温度：40±2℃ 相对湿度：90%～95% 搁置时间：96小时，取出恢复2h后检查 Temperature：40±2℃ Relative Humidity：90%～95% Duration：96 hours	1.接触电阻 LLCR:≤10mΩ 2.绝缘电阻 Insulation Resistance：≥1000MΩ 3.耐电压 Dielectric Strength：≥1000V
15	耐高温 Heat Resistance	连接器配合后，于85℃±2℃的空气中放置96小时，然后再回到室温中放置1～2h小时测定 Mated connectors are exposed to a temperature of 85℃±2℃ for 96 hours.	外观 Appearance: 无损伤 No Damage
16	耐低温 Clod Resistance	连接器配合后，于-25℃±2℃的空气中放置96小时，然后再回到室温中放置1～2h小时测定 Mated connectors are exposed to a temperature of -25℃±2℃for 96 hours.	外观 Appearance: 无损伤 No Damage
17	机械振动 Vibration	插合连接器，串联在一直流电源上，电流100mA;并模拟正常工作状态,振频为10～55Hz、振幅1.5mm；55～500Hz、加速度50m/s^2,每一轴线扫频循环次数10次、2小时。 Frequency：10～55Hz Amplitude：±1.5mm Frequency：＞55～500Hz Acceleration：50m/s^2 Duration：2 hours in each X,Y,Z axes	1.中断 Intermittence：≤1μ second 2.接触电阻 LLCR:≤20mΩ

产品规格书

PRODUCT SPECIFICAION

版本号
Version Number: A

产品编码
Part Number: D2801

产品性能测试 Performance test			
	项目 Item	测试条件 Test Condition	规格要求 Requirement
18	盐雾 Salt Spray	把先冲后镀的测试样品从试验箱顶悬挂下来，采用浓度为5%±1(质量百分比)的氯化钠溶液，连续雾化16小时，试验后用流动的蒸馏水轻轻洗去表面沉积物。在常温常驻湿条件下恢复1～2小时。 16 hour exposure to a saltspray from the 5%±1 solution.	1.外观无损伤(五金件应无露出底金属的严重锈蚀) Appearance:No Damage(No erosion with material exposed.) 2.接触电阻 LLCR:≤10mΩ
29	耐焊接热 Resistance to Soldering Heat	把测试样品需要焊接的部位浸入焊锡炉中(锡炉温度260℃)；2±0.5秒钟后在正常的条件下恢复1小时。 Soldering time: 2±0.5 second Solder Temperature:260℃	/
20	温度上升 Temperature Rise	插合连接器,通以最大允许电流。 Carring rated current load.	温度最大上升 Temperature Rise:≤30℃

注：除非另有规定，所有试验和测量都应在标准实验大气条件下进行：
温　　度：15~35℃
相对湿度：45%~75%RH
气　　压：86~106kpa(860~1060mbar)
未特殊说明处，试验输入电流、输出电压等均为50/60Hz交流信号

序号	变更记录	变更原因	变更时间	责任人
变更记录				

制订 Edit: ____ 审核 Check: WZY 批准 Approval: CZH 日期 Date: 22/03/01

LHE 浙江联和电子有限公司

试 验 报 告

试验项目:针焰实验　　试验日期：2022/2/25

产品或零件名称	PA66　94V0 样条	生产单位	注塑
样品数量	各 3PCS	检验标准	GB/T5169.5-2008
检验设备	针焰实验箱	进货批号	/

标准要求	指标	a.试验样品无火焰和灼热，并且规定的铺底层或包装绢纸没有起燃 b.在移开针焰后，试验样品和周围的零部件的火焰或灼热在 30s 之内熄灭，即 tb＜30s,而且周围的零部件没有完全烧毁，以及规定的铺底层或包装绢纸没有起燃
	试验条件	施加试验火焰持续时间为 12s。火焰高度 12mm±1mm。
试验结果		 产品施焰时间 12s,续燃时间 2.6s。无滴落物。
判定		符合要求 实验员：石斛　　审核员：陈哲海

表单编号：QR/LHE-PZ-019　　**版本：B/0**

ECBT2.E364711 - Connectors for Use in Data, Signal, Control and Power Applications - Component

Connectors for Use in Data, Signal, Control and Power Applications - Component

See General Information for Connectors for Use in Data, Signal, Control and Power Applications - Component

ZHEJIANG LIANHE ELECTRONIC CO LTD E364711
Chuangxin Road, YueQing Bay Port Zone
Yueqing, Zhejiang 325600 CHINA
Connector, Model(s) 1.58-LHE f/b 2 , f/b 1 thru 12, f/b A2 or AW., 1.58-LHE f/b 2 thru 6, f/b A2 or AW

Connector, Model(s) 1.58-LHE followed by 2, followed by 1 thru 12, followed by A(T).

Connector, Model(s) 1.58-LHE, f/b 2 thru 6 , f/b A(T)., 1.58-LHE, f/b 2 thru 6, f/b Y(T), 1.58-LHE, f/b 2, f/b 1 thru 12 , f/b Y(T)., 2510-LHE f/b 2 , f/b 1 thru 12, f/b A2 or AW, 2510-LHE f/b 2 thru 6, f/b A2 or AW

Connector, Model(s) 2510-LHE followed by 2, followed by 1 thru 12, followed by A(T)

Connector, Model(s) 2510-LHE, f/b 2 thru 6 , f/b A(T), 2510-LHE, f/b 2 thru 6, f/b Y(T), 2510-LHE, f/b 2, f/b 1 thru 12 , f/b Y(T), 5.08-LHE f/b 2 , f/b 1 thru 12, f/b A2 or AW, 5.08-LHE f/b 2 thru 6, f/b A2 or AW

Connector, Model(s) 5.08-LHE followed by 2, followed by 1 thru 12, followed by A(T)

Connector, Model(s) 5.08-LHE, f/b 2 thru 6 , f/b A(T), 5.08-LHE, f/b 2 thru 6, f/b Y(T), 5.08-LHE, f/b 2, f/b 1 thru 12 , f/b Y(T), 51005-LHE f/b 2 , f/b 1 thru 12, f/b A2 or AW, 51005-LHE f/b 2 thru 6, f/b A2 or AW

Connector, Model(s) 51005-LHE followed by 2, followed by 1 thru 12, followed by A(T)

Connector, Model(s) 51005-LHE, f/b 2 thru 6 , f/b A(T), 51005-LHE, f/b 2 thru 6, f/b Y(T), 51005-LHE, f/b 2, f/b 1 thru 12 , f/b Y (T), 51006-LHE f/b 2 , f/b 1 thru 12, f/b A2 or AW, 51006-LHE f/b 2 thru 6, f/b A2 or AW

Connector, Model(s) 51006-LHE followed by 2, followed by 1 thru 12, followed by A(T)

Connector, Model(s) 51006-LHE, f/b 2 thru 6 , f/b A(T), 51006-LHE, f/b 2 thru 6, f/b Y(T), 51006-LHE, f/b 2, f/b 1 thru 12 , f/b Y (T), 5102-LHE f/b 2 , f/b 1 thru 12, f/b A2 or AW, 5102-LHE f/b 2 thru 6, f/b A2 or AW

Connector, Model(s) 5102-LHE followed by 2, followed by 1 thru 12, followed by A(T)

Connector, Model(s) 5102-LHE, f/b 2 thru 6 , f/b A(T), 5102-LHE, f/b 2 thru 6, f/b Y(T), 5102-LHE, f/b 2, f/b 1 thru 12 , f/b Y(T), 5240-LHE f/b 2 , f/b 1 thru 12, f/b A2 or AW, 5240-LHE f/b 2 thru 6, f/b A2 or AW

Connector, Model(s) 5240-LHE followed by 2, followed by 1 thru 12, followed by A(T)

Connector, Model(s) 5240-LHE, f/b 2 thru 6 , f/b A(T), 5240-LHE, f/b 2 thru 6, f/b Y(T), 5240-LHE, f/b 2, f/b 1 thru 12 , f/b Y(T), 5500-LHE f/b 2 , f/b 1 thru 12, f/b A2 or AW, 5500-LHE f/b 2 thru 6, f/b A2 or AW

Connector, Model(s) 5500-LHE followed by 2, followed by 1 thru 12, followed by A(T)

Connector, Model(s) 5500-LHE, f/b 2 thru 6 , f/b A(T), 5500-LHE, f/b 2 thru 6, f/b Y(T), 5500-LHE, f/b 2, f/b 1 thru 12 , f/b Y(T), 5557 followed by 2 thru 6, followed by A(T), 5557 followed by 2 thru 6, followed by A2 or AW, 5557 followed by 2 thru 6, followed by Y(T)

Connector, Model(s) 5557 followed by 2, followed by 1 thru 12, followed by A(T).

Connector, Model(s) 5557 followed by 2, followed by 1 thru 12, followed by A2 or AW

Connector, Model(s) 5557 followed by 2, followed by 1 thru 12, followed by Y(T)

Connector, Model(s) 5559-LHE f/b 2 , f/b 1 thru 12, f/b A2 or AW, 5559-LHE f/b 2 thru 6, f/b A2 or AW

Connector, Model(s) 5559-LHE followed by 2, followed by 1 thru 12, followed by A(T).

Connector, Model(s) 5559-LHE, f/b 2 thru 6 , f/b A(T), 5559-LHE, f/b 2 thru 6, f/b Y(T), 5559-LHE, f/b 2, f/b 1 thru 12 , f/b Y(T), 5566-LHE f/b 2 , f/b 1 thru 12, f/b A2 or AW, 5566-LHE f/b 2 thru 6, f/b A2 or AW

Connector, Model(s) 5566-LHE followed by 2, followed by 1 thru 12, followed by A(T)

Connector, Model(s) 5566-LHE, f/b 2 thru 6 , f/b A(T), 5566-LHE, f/b 2 thru 6, f/b Y(T), 5566-LHE, f/b 2, f/b 1 thru 12 , f/b Y(T), 5569-LHE f/b 2 , f/b 1 thru 12, f/b A2 or AW, 5569-LHE f/b 2 thru 6, f/b A2 or AW

Connector, Model(s) 5569-LHE followed by 2, followed by 1 thru 12, followed by A(T)

Connector, Model(s) 5569-LHE, f/b 2 thru 6 , f/b A(T), 5569-LHE, f/b 2 thru 6, f/b Y(T), 5569-LHE, f/b 2, f/b 1 thru 12 , f/b Y(T), 5600-LHE f/b 2 , f/b 1 thru 12, f/b A2 or AW, 5600-LHE f/b 2 thru 6, f/b A2 or AW

Connector, Model(s) 5600-LHE followed by 2, followed by 1 thru 12, followed by A(T)

Connector, Model(s) 5600-LHE, f/b 2 thru 6 , f/b A(T), 5600-LHE, f/b 2 thru 6, f/b Y(T), 5600-LHE, f/b 2, f/b 1 thru 12 , f/b Y(T), 63080-LHE f/b 2 , f/b 1 thru 12, f/b A2 or AW, 63080-LHE f/b 2 thru 6, f/b A2 or AW

Connector, Model(s) 63080-LHE followed by 2, followed by 1 thru 12, followed by A(T)

Connector, Model(s) 63080-LHE, f/b 2 thru 6 , f/b A(T), 63080-LHE, f/b 2 thru 6, f/b Y(T), 63080-LHE, f/b 2, f/b 1 thru 12 , f/b Y (T), B2502 followed by 2 thru 16, followed by Y(T), BH3.5-2A(T), BH3.5-2Y(T), MX3.0 followed by 2 thru 12, followed by A(T), MX3.0 followed by 2 thru 12, followed by A2 or AW, MX3.0 followed by 2 thru 12, followed by Y(T)

Connector, Model(s) MX3.0 followed by 2, followed by 1 thru 12, followed by A(T).

Connector, Model(s) MX3.0 followed by 2, followed by 1 thru 12, followed by A2 or AW

Connector, Model(s) MX3.0 followed by 2, followed by 1 thru 12, followed by Y(T)

Connector, Model(s) PA-LHE f/b 2, f/b 1 thru 12, f/b Y(T), PA-LHE followed by 2 thru 12, followed by A(T)

Connector, Model(s) PA-LHE followed by 2 thru 12, followed by A2 or AW

Connector, Model(s) PA-LHE followed by 2 thru 12, followed by Y(T)

Connector, Model(s) PA-LHE followed by 2, followed by 1 thru 12, followed by A(T)

Connector, Model(s) PA-LHE followed by 2, followed by 1 thru 12, followed by A2 or AW

Connector, Model(s) PH, PHB, XHB, JC25, SCN followed by -2 thru -20, followed by Y(T), A, AW or AWD

Connector, Model(s) PHB followed by 2 thru 16, followed by Y(T). followed by 2 thru 16, followed by AWD, A, AW

Connector, Model(s) Series 1.25, 1254, 1255 followed by -2 thru -25, followed by Y(T), A or AW

Connector, Model(s) Series 5264 followed by -2 thru -16, followed by Y(T), A or AWD

Connector, Model(s) SM followed by -2 thru -18, followed by Y(T) or A(T)

Connector, Model(s) VH, 3.96 followed by -2 thru -16, followed by Y(T), A, AW or AWG

Connector, Model(s) XA-LHE f/b 2, f/b 1 thru 12, f/b Y(T), XA-LHE followed by 2 thru 12, followed by A(T)

Connector, Model(s) XA-LHE followed by 2 thru 12, followed by A2 or AW

Connector, Model(s) XA-LHE followed by 2 thru 12, followed by Y(T)

Connector, Model(s) XA-LHE followed by 2, followed by 1 thru 12, followed by A(T)

Connector, Model(s) XA-LHE followed by 2, followed by 1 thru 12, followed by A2 or AW

Connector, Model(s) XH followed by -2 thru -20, followed by Y(T), A, AW, AWGD, AWD or AWGDJ

Connector, Model(s) ZH followed by 2 thru 16, followed by AWD or A, ZH followed by 2 thru 16, followed by Y(T).

Model(s) 1.25, followed by -2 thru -16, followed by AB or AWB

Model(s) 51146 or FI-S, followed by -2 thru -16, followed by AB or AWB

Model(s) A5001, followed by -2 thru -7, followed by Y, Y(T), AD or AWD

Model(s) B2501-LHE, A2004-LHE, A4203-LHE, PHR-LHE, PHD-LHE, CH2.5-LHE, DF11-LHE, PHSD-LHE, A5001-LHE, 35155-LHE, 35156-LHE, 5195-LHE, 5196-LHE, followed by 2 thru 16, followed by Y(T)

Model(s) BHS-LHE, SMH250-LHE, SMH200-LHE, L6.2-LHE, 1806-LHE, 2060-LHE, 2541-LHE, JC15-LHE, XHD-LHE, followed by -2, followed by A(T), or Y(T)

Model(s) JWPF-LHE, B2541-LHE, NV-LHE, DV-LHE, SGN-LHE, SJN-LHE, SDN-LHE, SIN-LHE, 35150-LHE, 35151-LHE, 35180-LHE, 35182-LHE, 35524-LHE, 35965-LHE, RCY-LHE, LC-LHE, VR-LHE, SHJ-LHE, SHL-LHE, DF19-LHE, ACH-LHE, DF13-LHE, IL-Z-LHE, 51146-LHE, SATA-LHE, XSR-LHE, SUR-LHE, SUH-LHE, ZE-LHE, ZND-LHE, ZPD-LHE, A1502-LHE, SFH-LHE,51004-LHE, PUD-LHE, A20010-LHE, 35507-LHE, DF3-LHE, PND-LHE, RE-LHE,RA-LHE, RF-LHE or A3963, followed by -2 thru -15, followed by Y(T), YB(T) or YC(T), A, A-K, AW, AW-K, AD, AD-K, AWGD, AWGD-K, AQ, AQ-K, AWQ, AWQ-K, AD(BH) or AD(BH)-K.

Model(s) PH, followed by -2 thru -16, followed by AB or AWB

Model(s) PHB, SZN-LHE, SAN-LHE, JC20-LHE, EH-LHE, EI-LHE, EL-LHE, S-EL-LHE, followed by 2 thru 16, followed by AWD, A, AW

Model(s) PHB, SZN-LHE, SAN-LHE, JC20-LHE, EH-LHE, EI-LHE, EL-LHE, S-EL-LHE, followed by 2 thru 16, followed by Y(T)

Model(s) PHB, XH, XHB or XHBD, followed by -2 thru -16, followed by AB or AWB.

Model(s) RAST 5-LHE TAB HEADER ASSY , TH, Vertical, Cat. Nos. 1969738-LHE,1969740-LHE, 1971845-LHE, 1971846-LHE, 1971895-LHE, 1971896-LHE, 1971946-LHE thru 1971949-LHE, 1971954-LHE thru 1971957-LHE, 2232008-LHE thru 2232011-LHE, 2232000-LHE thru 2232003-LHE, 2232016-LHE thru 2232019-LHE, 1971962-LHE thru 1971965-LHE, 2232024-LHE thru 2232027-LHE, 2232289-LHE thru 2232292-LHE, 2232043-LHE thru 2232074-LHE, 2232298-LHE thru 2232301-LHE, 2232511-LHE, 2232532-LHE, 2232557-LHE, 2232559-LHE, 2232560-LHE, 2232562-LHE, 2232563-LHE, 2232565-LHE, 2232566-LHE, 2232568-LHE, 2232569-LHE, 2232571-LHE, 2232572-LHE, 2232574-LHE, 2232575-LHE, 2232577-LHE, 2232578-LHE, 2232580-LHE, 2232581-LHE, 2232583-LHE, 2232584-LHE, 2232586-LHE, 2232587-LHE, 2232589-LHE, 2232590-LHE, 2232592-LHE, 2232593-LHE, 2232595-LHE, 2232596-LHE, 2232598-LHE, 2232599-LHE, 2232601-LHE, 2232602-LHE, 2232604-LHE, 2232605-LHE, 2232607-LHE, 2232608-LHE, 2232611-LHE thru 2232682-LHE, 2292457-LHE, 2292458-LHE, may incorporate prefix and/or suffix number.), followed by -2 thru -7, followed by Y, Y(T), AD or AWD.

Model(s) SY, followed by -2, followed by Y, Y(T), A or A(T)

Model(s) SYP, SYR, BH4.0-LHE, A10001-LHE, A7501-LHE, A8001-LHE, C2541-LHE, C2542-LHE, D250R-LHE, D280K-LHE, D300R-LHE, D350R-LHE, D400B-LHE, D430R-LHE, D470G-LHE, D480J-LHE, D480K-LHE, D480N-LHE, D480Q-LHE, D520H-LHE, D520K-LHE, D520Q-LHE, D620G-LHE, D630J-LHE, D630N-LHE, D630Q-LHE, D700G-LHE, F001-LHE, F002-LHE, HIF3-LHE, MC100-LHE, MC100-LHE, ME020-LHE, ME010-LHE, F2541-LHE, D2301-LHE, 1719057-LHE, 1719059-1-LHE, P0011-LHE, P0012-LHE, P0013-LHE, C6001-LHE, D2201-LHE, D2202-LHE or P0001-LHE, followed by -2, followed by Y, Y(T), A or A(T).

Model(s) VL-LHE , YL-LHE, SL-LHE, FL-LHE, YHD200-LHE, HA-LHE, LGC-LHE, JR-LHE, SP-LHE, 5025-LHE, followed by 2, followed by 1 thru 12, followed by A(T), Y(T), A2 or AW

Model(s) VL-LHE, YL-LHE, SL-LHE, FL-LHE, YHD200-LHE, HA-LHE, LGC-LHE, JR-LHE, SP-LHE, 5025-LHE, followed by 2 thru 12, followed by A(T), Y(T), A2 or AW

Model(s) XHD, XHE or XHQ, followed by -2 thru -15, followed by Y(T), YB(T) or YC(T), A, A-K, AW, AW-K, AD, AD-K, AWGD, AWGD-K, AQ, AQ-K, AWQ, AWQ-K, AD(BH) or AD(BH)-K.

Model(s) ZH, followed by -2 thru -16, followed by AB or AWB

Model(s) ZHR-LHE, SH-LHE, GH-LHE, NH-LHE, C1251-LHE, DF14-LHE, 5501-LHE, 75416-LHE, 543-LHE, followed by 2 thru 16, followed by AWD or A

Model(s) ZHR-LHE, SH-LHE, GH-LHE, NH-LHE, C1251-LHE, DF14-LHE, 5501-LHE, 75416-LHE, 543-LHE, followed by 2 thru 16, followed by Y(T)

Marking: Company name or trademark LHE, model designation and the Recognized Component Mark, on the device or carton.

Last Updated on 2020-02-20

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产品认证证书

证书编号：CQC17134174484

申请人名称及地址

浙江联和电子有限公司

浙江省乐清市乐清湾港区乐商创业园

制造商名称及地址

浙江联和电子有限公司

浙江省乐清市乐清湾港区乐商创业园

生产企业名称及地址

浙江联和电子有限公司(V028069)

浙江省乐清市乐清湾港区创新路8号

产品名称和系列、规格、型号

连接器聚酰胺66(PA66)

型号见附件，材料名称：聚酰胺（PA66），材料牌号：A3RV0，全色， 球压:200℃，灼热丝可燃性指数(GWFI):960/0.3，灼热丝起燃温度(GWIT):960/0.3，燃烧等级:V-0@0.3mm,CTI600，红外光谱,差示扫描量热和热重分析见报告00601-2019134003025

产品标准和技术要求

GB/T5169.21-2017，GB/T 5169.12-2013，GB/T 5169.13-2013，GB/T 5169.16-2017，GB/T 4207-2012，GB/T 6040-2002，GB/T 19466.1-2004，GB/T 19466.2-2004，GB/T 19466.3-2004，ISO 11358-1:2014

认证模式

产品检测+获证后监督

上述产品符合CQC13-036047-2009认证规则的要求，特发此证。

发证日期：2019年09月29日

本证书的有效性依据发证机构的定期监督获得保持。

本证书为变更证书，证书首次颁发日期：2017年07月27日

主任：

中国质量认证中心 CHINA QUALITY CERTIFICATION CENTRE

中国质量认证中心

中国．北京．南四环西路188号9区 100070

http://www.cqc.com.cn

C 0155366

Verification No.: CLZJ1411264692

VERIFICATION OF LVD COMPLIANCE

Applicant:	Zhejiang Lianhe Electrical Co., Ltd. Houyu village, Shifan town, Yueqing city, Zhejiang province, China.
Manufacturer:	Same as applicant
Product Description:	Connector Terminal
Model No:	A1001, A1002, A1003, A1251, A1252, A1253, A1254, A1255, A1256, A1257, A1501, A1502, A1503, A2001, A2002, A2003, A2004, A2005, A2006, A2007, A2501, A2502, A2503, A2504, A2505, A2505, A2506, A2507, A2541, A2542, A2543, A2544, A2545, A3961, A3962, A3963, A3564, A5081, A5082, B1501, B1502, B2001, B2002, B2501, B2502, C01581, C01582, C1251, C2001, C2002, C2501, C2502, C2505, C2506, C3001, C3002, C3003, C3004, C3005, C3006, C3501, C3502, C3701, C3702, C4001, C4002, C4141, C4142, C4201, C4202, C4203, C4204, C4601, C4602, C4501, C4502, C4503, C4504, C5001, C5002, C5031, C5032, C6201, C6202, C6351, C6352, C6701, C6702, D2801, D2802, D2803, D4801, D4802, D4803, D4804, D6301, D6302, D6303

Sufficient samples of the product have been tested and found to be in conformity with

Test Standard:	EN 60320-1:2001/A1:2007 EN 60529:1991/A1:2000
As shown in the Test Report Number(s):	TLZJ1411264692
Date of issue:	November 27, 2014

Conclusion

This Verification of LVD Compliance has been granted to the applicant based on the results of tests, performed by laboratory of Global Testing Services Co., Ltd on sample of the above-mentioned product in accordance with the provisions of the relevant specific standards and 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 conditions the conditions in annexes IIIand Ⅳ of the Directive are fulfilled.

Approved by: Hermann Weiher

For and on behalf of
Global Testing Services Co., Ltd

Global Testing Services Co., Ltd
E-mail:info@gts-lab.com http://www.gts-lab.com
Room 1501-1502, No. 520 Yishan Rd., Xuhui District, Shanghai, 200235 China

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QUALITY MANAGEMENT SYSTEM CERTIFICATE

Certificate No. 00117Q310977R2S/3302

We hereby certify that

Zhejiang LianHe Electronics Co., Ltd.

Unified Social Credit Code/ Organization Code certificate: 913303825540033504

Registration Address: Houyu Village, Shifan Town, Yueqing City, Wenzhou City, Zhejiang Province, China

Production Address: Yueshang Pioneer Park, Yueqing Bay Port Area, Yueqing City, Wenzhou City, Zhejiang Province China

by reason of its

Quality Management System

has been awarded this certificate for compliance with the standard

GB/T 19001-2016 / ISO 9001:2015

The Quality Management System Applies in the following area:

The Design, Production of Electronics Connector

Certified since: February 13, 2012 Valid from: December 11, 2017 Valid until: December 14, 2020

After a surveillance cycle, the certificate is valid only when used together with an Acceptance Notice of Surveillance Audit issued by CQC.
Please access www.cqc.com.cn for checking validity of the certificate.
This certificate and its relevant information can query in the website of Certification and Accreditation Administration of the People's Republic of China (www.cnca.gov.cn).

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MANAGEMENT SYSTEM
CNAS C001-M

Signed by: Wang Kejiao

CHINA QUALITY CERTIFICATION CENTRE

Section 9, No.188, Nansihuan(the South Fourth Ring Road) Xilu(West Road), Beijing 100070,China

http://www.cqc.com.cn

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2015年版

THE INTERNATIONAL CERTIFICATION NETWORK

CERTIFICATE

IQNet and
CQC
hereby certify that the organization

Zhejiang LianHe Electronics Co., Ltd.

Registration Address: Houyu Village, Shifan Town, Yueqing City, Wenzhou City, Zhejiang Province, China
Production Address: Yueshang Pioneer Park, Yueqing Bay Port Area, Yueqing City, Wenzhou City, Zhejiang Province China

For the following field of activities

The Design, Production of Electronics Connector

Has implemented and maintains a
Management System
Which fulfils the requirements of the following standard

GB/T 19001-2016 / ISO 9001:2015

Issued on: December 11, 2017

Validity date: December 14, 2020

Registration Number: 00117Q310977R2S/3302

Michael Drechsel
President of IQNet

Wang Kejiao
President of CQC

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测试报告

No. SHAEC2106861104　　日期: 2021年04月16日　第1页,共10页

浙江联和电子有限公司

浙江省乐清市乐清湾港区创新路8号

以下测试之样品是由申请者所提供及确认 : PA66 连接器

SGS工作编号 :	SP21-010979 - SH
主要成分 :	PA66
客户参考信息 :	见附件
样品接收日期 :	2021年04月14日
测试周期 :	2021年04月14日 - 2021年04月16日
测试要求 :	根据客户要求测试
测试方法 :	请参见下一页
测试结果 :	请参见下一页
结论 :	基于所送样品进行的测试，镉、铅、汞、六价铬、多溴联苯(PBBs)、多溴二苯醚(PBDEs) 邻苯二甲酸酯（如邻苯二甲酸二丁酯 (DBP)、邻苯二甲酸丁苄酯(BBP)、邻苯二甲酸二(2-乙基己基)酯(DEHP)和邻苯二甲酸二异丁酯(DIBP)）的测试结果不超过客户限值。

通标标准技术服务（上海）有限公司
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SHAEC2106861104

Tom Ni倪俊
批准签署人

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测试结果 :

测试样品描述 :

样品编号	SGS样品ID	描述
SN1	SHA21-068611.001	白色固体
SN2	SHA21-068611.002	银色金属

备注 :

(1) 1 mg/kg = 0.0001%

(2) MDL = 方法检测限

(3) ND = 未检出 (< MDL)

(4) "-" = 未规定

镉(Cd),铅(Pb),汞(Hg),六价铬(Cr(VI)),多溴联苯(PBBs),多溴二苯醚(PBDEs),邻苯二甲酸酯

测试方法 : 参考IEC 62321-4:2013+AMD1:2017， IEC 62321-5:2013， IEC 62321-7-2:2017， IEC 62321-6:2015和IEC 62321-8:2017， 采用ICP-OES，UV-Vis和GC-MS进行分析.

测试项目	限值	单位	MDL	*001*
镉(Cd)	75	mg/kg	2	ND
铅(Pb)	600	mg/kg	2	ND
汞(Hg)	600	mg/kg	2	ND
六价铬 (Cr(VI))	600	mg/kg	8	ND
多溴联苯之和(PBBs)	600	mg/kg	-	ND
一溴联苯	-	mg/kg	5	ND
二溴联苯	-	mg/kg	5	ND
三溴联苯	-	mg/kg	5	ND
四溴联苯	-	mg/kg	5	ND
五溴联苯	-	mg/kg	5	ND
六溴联苯	-	mg/kg	5	ND
七溴联苯	-	mg/kg	5	ND
八溴联苯	-	mg/kg	5	ND
九溴联苯	-	mg/kg	5	ND
十溴联苯	-	mg/kg	5	ND
多溴二苯醚之和(PBDEs)	600	mg/kg	-	ND
一溴二苯醚	-	mg/kg	5	ND
二溴二苯醚	-	mg/kg	5	ND
三溴二苯醚	-	mg/kg	5	ND

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测试项目	限值	单位	MDL	001
四溴二苯醚	-	mg/kg	5	ND
五溴二苯醚	-	mg/kg	5	ND
六溴二苯醚	-	mg/kg	5	ND
七溴二苯醚	-	mg/kg	5	ND
八溴二苯醚	-	mg/kg	5	ND
九溴二苯醚	-	mg/kg	5	ND
十溴二苯醚	-	mg/kg	5	ND
邻苯二甲酸二丁酯 (DBP)	600	mg/kg	50	ND
邻苯二甲酸丁苄酯(BBP)	600	mg/kg	50	ND
邻苯二甲酸二(2-乙基己基)酯(DEHP)	600	mg/kg	50	ND
邻苯二甲酸二异丁酯(DIBP)	600	mg/kg	50	ND

备注：

(1) 最大允许限值来源于客户要求。
IEC 62321系列等同于 EN 62321系列
https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101::::FSP_ORG_ID,FSP_LANG_ID:1258637,25

镉(Cd),铅(Pb),汞(Hg),六价铬(Cr(VI))

测试方法： 参考IEC 62321-4:2013+AMD1:2017， IEC 62321-5:2013和 IEC 62321-7-1:2015，采用ICP-OES和UV-Vis进行分析。

测试项目	限值	单位	MDL	002
镉 (Cd)	75	mg/kg	2	ND
铅(Pb)	600	mg/kg	2	17
汞 (Hg)	600	mg/kg	2	ND
六价铬(Cr(VI))▾	-	μg/cm²	0.10	ND

备注：

(1) 最大允许限值来源于客户要求。
IEC 62321系列等同于 EN 62321系列
https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101::::FSP_ORG_ID,FSP_LANG_ID:1258637,25
(2) ▾ = a. 当六价铬的浓度高于0.13 μg/cm²时，样品为阳性，即含有六价铬；
b. 当六价铬的浓度为ND(低于0.10 μg/cm²)时，样品为阴性，即未检测到六价铬；
c. 当六价铬的浓度介于0.10 μg/cm²与0.13 μg/cm²之间时，无法直接判定是否检测到六价铬，因不同个体的样品表面差异可能会影响测定结果；
由于未获知样品的存储条件和生产日期，样品的六价铬测试结果仅能代表测试时样品含六价铬的状态。
除非另有说明，此报告结果仅对测试的样品负责。本报告未经本公司书面许可，不可部分复制。

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附件

1.0, SH, SHD, 1.25, 51021, DF14, DF13, GH, ZH, PH, PHB, PA, PHSD, DF11, C1251, 51047, 51146, FI-S, PHD, YHD200, PA, SMP, SMW, SMH, SMH200, SMH200-H, YH200, 20039WR, 杜邦2.0, XH/TJC3, XA, HA, XHB, XHD, XHE, EH, EI, 小四P, 5263, 5264, 5267, 5268, SZN, SAN, SCN, SCND, JC15, JC20, JC25, 5102, 5240, SMH250, SMP250, SMW250, 25048HS, 25045HP, SM, TJC8, 杜邦2.54, TJC8A, 杜邦带锁, TJC8B, TJC8H, 5051, 2510, 美尚美, 43640, 43645, 43020, 43025, 5500, 5600, VH, VHRR, YH396, VHR, 35156, 2139, 3.96, 90331, 5195, 5196, 39612, FL, 5557, 5559, 5566, 5569, SL, RV42, EL, YL, 小EL, 8981, 大四P, 5058, 5.08, L6.2, VL, VLP/VLR, TJC2, TJC2A, TJC2B, TJC4, TJC1, 1806, MX3.0, 1.58, 51005, 51006, BH3.5, BH4.0, 63080, 51004, TJC15, A4203, CL014, OTP, MKH, SMF, Cy-X201, 35108, 35150, 35151, 35224, 35180, 35965, 42021, 42022, 42002, 35955, SA, SCS, 35189, 35196, CH10, CH2.5, 543, SLP, SLR, YHL500, YWL500, FFC, FPC, 20030, 250, LGC, S11, YH025, 35155, 25415, 5197, 5198, 110, 2.8, 6.3, SCS

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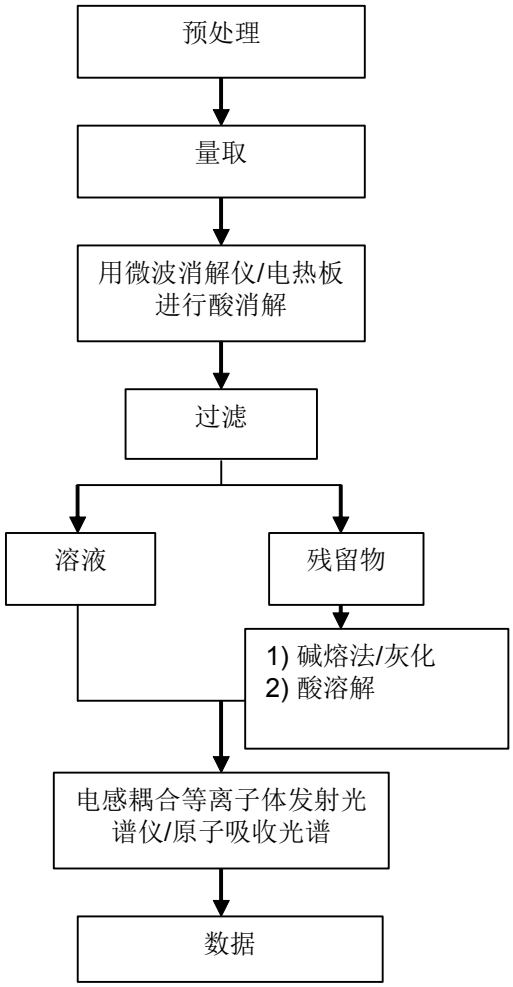
附件

元素(IEC62321) 测试流程图

1)样品按照下述流程被完全消解



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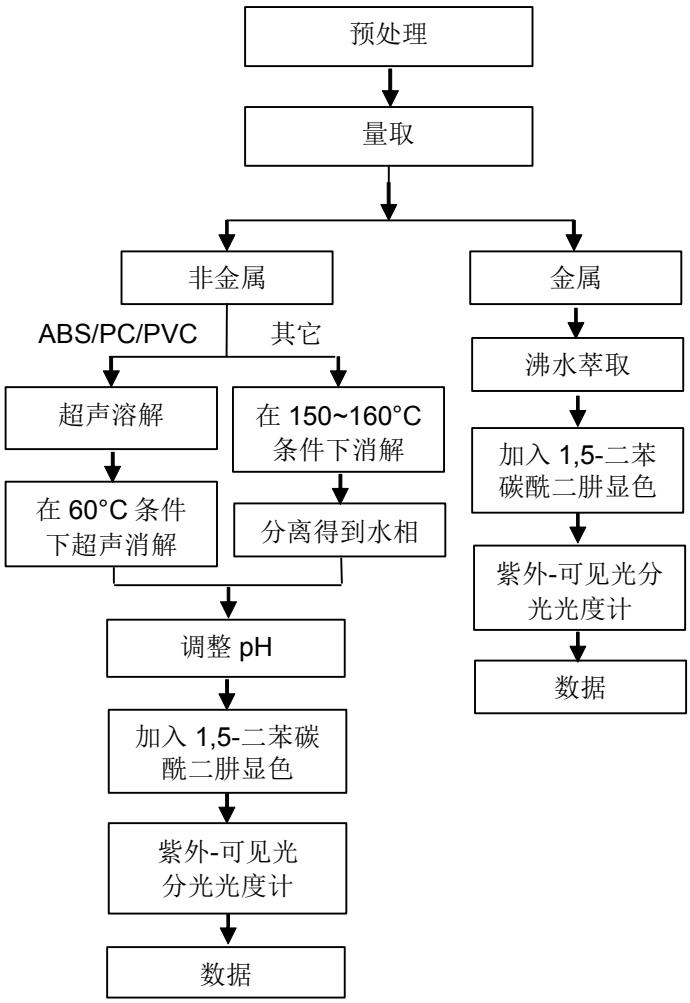
附件

六价铬测试流程图



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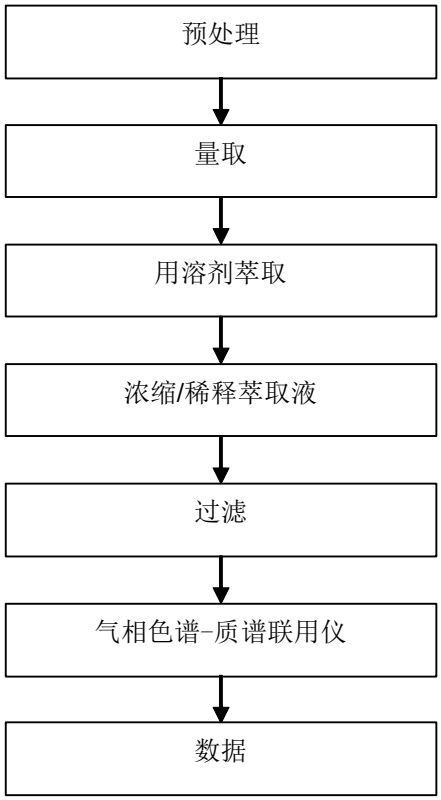
附件

PBBs/PBDEs 测试流程图



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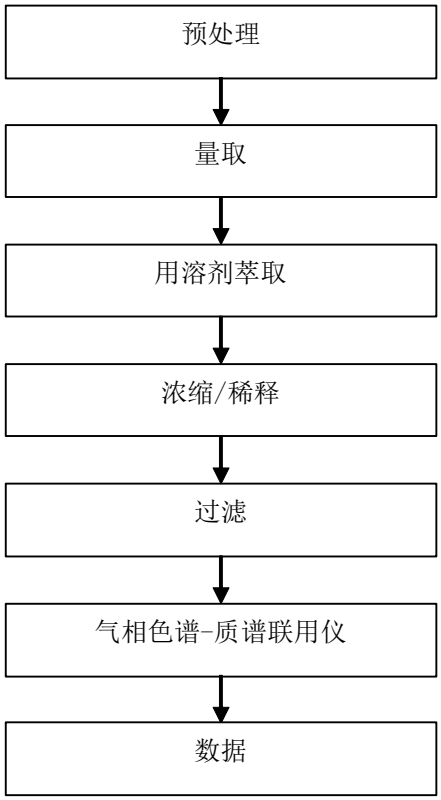
附件

Phthalates 测试流程图



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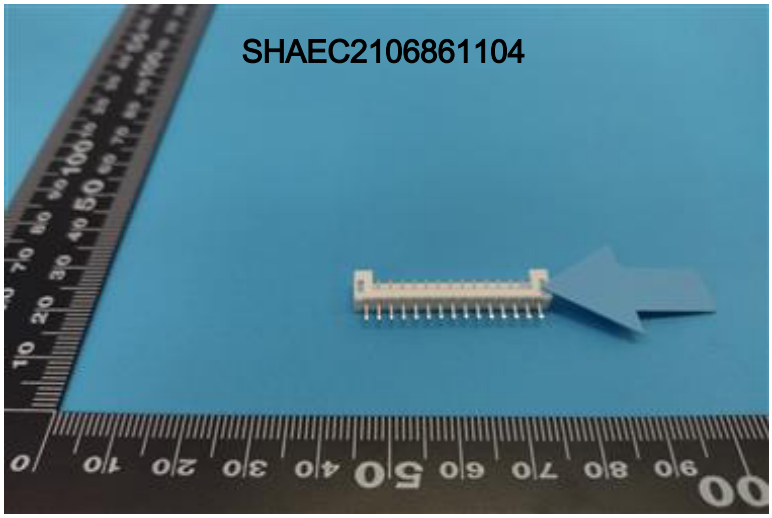
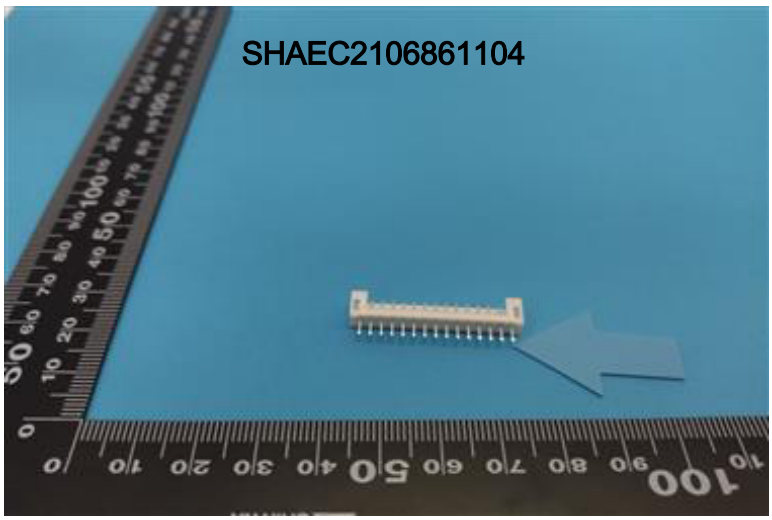
样品照片:



SHA21-068611.001



SHA21-068611.002

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1 Product and company identification

PRODUCT NAME	:	CNYL A66V0
Use	:	Manufacture of articles by injection and extrusion
SUPPLIER	:	Seller
Name	:	Hangzhou XUNSU Polymer Material CO. LTD.
Address	:	No.198 Qidi RD,Xiaoshan Economic and Technological Development Zone,Hangzhou,Zhejiang,China
Telephone number	:	+86-0571-83686806
Telefax number	:	+86-0571-83686807

2 Composition / information on ingredients

>> PREPARATION

Chemical name	:	Product based on Polyamide 6.6 (CAS : 32131-17-2) Melamine cyanurate (CAS : 1502-27-2) & additive 1~20%
Component contributing to the hazard	:	
Component presenting hazard	:	
>> Further information	:	§ : (R) Revision of the entry in the Adaptation to Technical Progress of Annex 1 of Directive 67/548/EEC Semi-processed polymer. (*)

3 Hazard identification

MOST IMPORTANT HAZARDS :

Adverse human health effect	:	Limited evidence of a carcinogenic effect. (*)
Physical and chemical hazards :		
- Further hazards	:	Risk of splashing. On heating to temperature above 250℃.
Specific hazards	:	According to EC regulations, this product is not classified as a “hazardous preparation”.
Further information	:	Although classified according to EC criteria (calculated by the conventional method), this product is not exempt from labeling according to article 9.3 of Annex 6 of Directive 67/548/EEC, 28th ATP. (*)

4 First-aid measures

Inhalation	:	Not specifically applicable.
Skin contact	:	Not specifically applicable. However, in the event of fire, molten product may cause thermal burns. In this case : Rinse with plenty of water. DO NOT remove clothing(since it may stick to the skin) Call a doctor immediately.
Eye contact	:	Not specifically applicable.
Ingestion	:	Not specifically applicable.

5 Fire-fighting measures

Extinguishing method :

- Suitable	:	All extinguishable agents can be used(water, form, powders, carbon dioxide, sand, etc)
- Not suitable	:	None. If there is a fire close by, use suitable extinguishing agents.
Specific hazards	:	Harmful or toxic vapors are released. Combustible product, melts on heating. Risk of fire spreading due to the flow of liquid which is already alight
Specific fire fighting methods	:	Cool the molten products.
Protection of fire-fighters	:	Self-contained breathing apparatus

6 Accidental release measures

Personal precautions	:	Prevent the product from spreading into the environment
Environmental precautions	:	This product does not present any particular risk for the environment.
Method for cleaning up	:	
- Recovery	:	Recover the product by vacuuming/shoveling or swelling.
- Cleaning/Decontamination	:	Sweep

7 Handling and storage

HANDLING

Technical measure	:	Does not require any specific or particular measures.
Safe handling advice	:	Handle and use in accordance with good occupational hygiene and safety practice.

STORAGE

Technical measure	:	Does not require any specific or particular technical measures.
Storage condition		
- Recommended	:	Store: - Away from any flames. - Protected from humidity and bad weather conditions. (*)
Incompatible products	:	Oxidizing materials
Packaging	:	The product is packaged in suitable recyclable packaging.
Packaging materials		- Plastic bag with lined Al foil or plastic film.
- Recommended	:	Cardboard, Paper with plastic film, All common metals.

8 Exposure controls / personal protection

Engineering measures	:	The product, as is, does not require any specific/particular measures provided it is handled in accordance with good industrial hygiene and safety practice. During the transformation process : Extract to remove vapors at their source.

Control parameters

Occupational exposure limits

- Limits(France)	:	No specific limits.
- Limits(Korea)	:	No specific limits.
Personal protective equipments	:	Does not require any specific or particular technical measures.
- Hand Protection	:	Appropriate glove. (*)
- Eye Protection	:	Safety goggles. (*)
- Skin and body protection	:	No specific/particular action required for this product. Comply with

		good occupational hygiene practice.
Further Information	:	The product (as is) or during its use, does not produce dust. The difference components and fillers are incorporated in the bulk of the polymer.

9 Physical and chemical properties

APPEARANCE

- Physical state	:	Solid
- Form	:	Pellets
- Color	:	Depends on the pigment.
Odor	:	None to very slight.
pH	:	Not applicable
Specific temperatures		
- Melting	:	Melting range 250~270℃
Decomposition temperature	:	> 300℃
Flammability characteristics		
- Flash point	:	> 400℃ (Closed cup)
- Auto-ignition temperature	:	> 450℃ (Spontaneous ignition temperature)
Oxidizing properties	:	Non oxidizing material according to EC criteria.
Solubility		
- in water	:	Practically insoluble.
- in organic solvents	:	Insoluble in common organic solvents.

10 Stability and reactivity

Stability	:	Stable under normal conditions of use.
Hazardous reactions	:	
- Conditions to avoid	:	No dangerous reactions known under normal conditions of use
- Hazardous decomposition products	:	On combustion or on thermal decomposition (pyrolysis) releases : Toxic gases (Carbon Oxides, CO+CO2) (Nitrogen Oxides, NOx) (Hydrogen Cyanide)

11 Toxicological information

Acute Toxicity	:	The preparation has not been tested. (*)
Local effects	:	The preparation has not been tested. (*)
Sensitisation	:	The preparation has not been tested. (*)
Specific effect		
- Carcinogenicity	:	Limited evidence of a carcinogenic effect. (by calculation according to the conventional method)
- Mutagenicity	:	No information available. (*)

12 Ecological information

MOBILITY

Precipitation	:	Slightly soluble product, readily forms deposits. (*)
Expected behavior of the product	:	Ultimate destination of the product : SOIL and SEDIMENT. (*)

BIODEGRADABILITY

- Ultimate aerobic biodegradability	:	Not biodegradable. (internal evaluation) (*)

BIOACCUMULATION

- Octanol/Water partition coefficient	:	Not potentially bioaccumulable. (internal evaluation) (*)

ECHOTOXICITY

- Effect on the aquatic environment	:	Due to its physical state, to be considered to be : The product does not have any known adverse effect on the aquatic organism tested. (internal evaluation) (*)

13 Disposal considerations

RESIDUES FROM PRODUCT

Destruction/Disposal	:	Recycle the material as far as possible. If it proves necessary to grind the product in order to recycle it, take it all necessary precautions to prevent the formation and spread of dust. Non recycled product : Incinerate at a licensed installation. Dispose of in accordance with relevant local regulations.

CONTAMINATED PACKAGING

Decontamination/Cleaning	:	Not applicable.
Destruction/Disposal	:	Depending on local facilities recycle the cardboard packaging, or incinerate it at an approved site.
NOTE	:	The user's attention is drawn to the possible existence of local regulations regarding disposal.

14 Transport information

INTERNATIONAL REGULATIONS

Land

- Rail/Road (RID/ADR)	:	Not restricted
Sea (IMO/IMDG)	:	Not restricted
Air (ICAO-IATA)	:	Not restricted
NOTE	:	The above regulations prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transport regulations for Hazardous materials, it would be advisable to check their validity with your sales office.

15 Regulatory information

LABELING :

China regulations	:	Mandatory labeling(self-classification) of hazardous preparations : **NOT APPLICABLE (*)**
EC regulations	:	Mandatory labeling(self-classification) of hazardous preparations :

		NOT APPLICABLE (*)
- R Phases	:	Not R Phases. (*)
- S Phases	:	Not R Phases. (*)
- Further data	:	Although classified according to EC criteria (calculated by conventional method), this product is exempt from labeling according to article 9.3 of Annex 6 of Directive 67/548/EEC, 28th ATP (*)
Further information	:	Packing confirms to Directive 94/62/EEC et to Decree 98-638
NOTE	:	The regulatory information given above only indicators the principle regulations specifically applicable to the product described in the Safety Data Sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16 Other information

Uses

- Prohibited use	:	For special application e.g. in medicine, surgery, or the food industry, obtain further information form the manufacturer.
Registration numbers	:	The polymers are not listed in the EINECS inventory. All the constituent of this preparation are registered in the EINECS inventory.
* Update	:	This sheet was updated (refer to the date at the top of this page). Subheadings and text which have been modified since the previous version are indicated with an asterisk (*)

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The Information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the products. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products. This information is not exhaustive. This does not exonerate the user from ensuring that regal obligations, other than those mentioned, relating to the use and storage of the products, do not exist. This is solely his responsibility.

SAFETY DATA SHEET（SDS）

Issued: December 3 , 2015
Revised: March 9 , 2016

FileNo. 4052-1

1.Chemical Product & Company Identification

CHEMICALPRODUCT NAME:	LAPEROS® E130i VF2201
NAME OF COMPANY:	Polyplastics Co.,Ltd.
ADDRESS:	2-18-1 Konan, Minato-ku, Tokyo,108-8280 Japan
SECTION IN CHARGE:	Quality Assurance Dept.
TELEPHONE NUMBER:	03-6711-8605
FACSIMILE NUMBER	03-6711-8616

2. Hazards identification

[GHS CLASSIFICATION]

Physical and Chemical Hazards : ・Flammable solids : Classification not possible
・Self-reactive substances and mixtures : Not applicable
・Pyrophoric solids : Not classified
・Self-heating substances and mixtures : Not classified
・Substances and mixtures, which in contact with water, emit flammable gases : Not classified
・Oxidizing solids : Not classified
・Corrosive to metal : Not classified

Health Hazards : ・Carcinogeneses : No hazard
・Specific target organ/systemic toxicity (Repeated exposure) : No hazard

[GHS CLASSIFICATION]

Environmental Hazards : No hazard

[SYMBOL] : None

[SIGNAL WORD] : None

[HAZARD STATEMENT] : None

[PRECAUTIONARY STATEMENTS]

Prevention : ・Wash hands thoroughly after handling.
・Wear protective gloves.

Response : –

Storage : Avoid direct sunlight and store in a well-ventilated place.

Disposal : Dispose of contents/container in accordance with local & national regulations.

3. Composition/information on ingredients

SUBSTANCE/PREPARATION	: Preparation
COMMON CHEMICAL NAME	: Aromatic Liquid Crystal Polymer
SYNONYMS	: Aromatic Liquid Crystal Polymer(LCP)
INGREDIENTS AND COMPOSITION	: LCP ≧69%, Glass fiber 30%, Others ≦1%
CHEMICAL FORMURA	: not open
SERIAL No. IN OFFICIAL GAZETTE	: 7-2577(base resin) (Law Concerning Examination and Regulation of Manufacture, etc. , of Chemical Substances)
CAS №.	: 147310-94-9(base resin)
INGREDIENTS CONTRIBUTING TO THE HAZARD	: Cadmium, lead, hexavalent chromium and mercury are not used in this grade.

4. First-aid measures

INGESTION : When a gas generated from the molten polymer has been inhaled, move to area of fresh air without delay and wait until the victim is recovered. If sick feeling continues, ask a physician for advice.

SKIN CONTACT : Cool the contacted skin with clean water without delay, if a contact with the polymer in a molten form. Do not force to remove the solid resin on the skin. If any burns are observed on

		the skin, ask a physician for advice.
EYE CONTACT	:	Cool and rinse the eye with clean water for at least 15 minutes when the eyes had contact with molten polymer. In case of wearing contact lenses, remove the lenses as soon as possible, and ask a physician for advice. When the eye had contact with the polymer in an ordinary solid form, rinse the eye with clean water without delay. If the discomfort persists, ask a physician for advice.
SWALLOW	:	Help to vomit as much as possible. If sick feeling continues, and ask a physician for advice.

5. Fire-fighting measures

EXTINGUISHING MEDIA	:	Water, foam fire-extinguishing agent, powder fire-extinguishing agent, and carbon dioxide gas.
SPECIFIC METHODS	:	Extinguish the fire with water. A method of extinguishing an ordinary fire may be applied. Do not apply water directly to processing machines.
SPECIFIC HAZARDS	:	Incomplete combustion leads to generation of toxic gases such as carbon monoxide or phenol, in addition to carbonic acid gas and water.
SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS	:	In case the fire gained force, use a gas mask or other protective equipment.

6. Accidental release measures

PERSONAL PRECAUTIONS	:	When pellets were spilled on the road or floor, wipe them off with a besom or cleaner not to cause slipping.
ENVIRONMENTAL PRECAUTION	:	Handle the spillage in accordance with provisions given in the "Resin pellet spillage preventive manual", in order to prevent intakes by marine animals and birds.

7. Handling and storage

HANDLING	:	LCP polymer in a pellet form will neither ignite nor explode at room temperatures.
HANDLING 2	:	This pellets spilled on the floor are likely to cause slipping. Remove such spillage at any times.
HANDLING 3	:	For molding work, effective means for local exhaust are required to discharge gases generated by melt processing.
HANDLING 4	:	Avoid inhaling of gases generated in molding work. Do not directly touch resin of high temperature.
HANDLING 5	:	Avoid retaining hot resin in the processing machines for many hours.
HANDLING 6	:	Glass fibers are not generally exposed in a single substance under normal processing and handling conditions as they are compounded in pellets. However, the following measures will be necessary to minimize the exposure to glass fibers or dusts containing glass fibers, when pellets or molded parts containing glass fibers are cut, ground or burnt, depending on environmental and operational conditions. ・Those who are sensitive in skin to glass fiber should wear suitable(protective) clothes to minimize the exposure of their skin. ・Wash working clothes apart from other laundry, so that the latter will not cause contamination with glass fibers. ・Provide the workshop with partitions to prevent diffusion of glass fiber dusts. ・Pay precautions not to rub face, neck or arms with hands. Wash hands and gargle after working without fall. ・Keep dust sources totally enclosed.

		・Provide local air exhausters and implement periodical inspections and adjustments at least once a year. ・Reduce cutting and grinding processes to the possible minimum, and devise working procedures to minimize dust generation. ・Provide dust-preventive masks, protective glasses and gloves for personal hygiene. ・Determine the operational environment at indoor working places and confirm the effects of environmental improvement. Note) Glass fibers are, like road dusts, told to be least hazardous to human bodies, but proper measures are required to avoid useless inhaling.
STORAGE	:	Keep the substance away from any fire or heat sources for the sake of safe storage.
STORAGE 2	:	Handle in accordance with municipal rules and regulations.
RECOMMENDED PACKAGING MATERIALS	:	No information.

8. Exposure controls/ personal protection

CONTROL CONCENTRATION	:	None at present
PERMISSIBLE CONCENTRATION	:	OSHA PEL/1985 Max. permissible concentration of inactive powder 15mg/m3 - ditto - (Aspiration) 5 mg/m3 ACGIH TLV/1992 1993 Exposure limit of the powder TWA 10 mg/m3
ENGINEERING MEASURE	:	・When handling dust: Use totally enclosed containers resisting dust explosion. ・When heat melted in molding: Effective local ventilation must be provided.
PERSONAL PROTECTIVE EQUIPMENT		
RESPIRATORY PROTECTION	:	Wear a dust-proof mask.
HAND PROTECTION	:	Wear heat-resisting gloves against burns, when handling molten polymer.
EYE PROTECTION	:	Wear protective glasses or goggles.
SKIN & BODY PROTECTION	:	Wear long sleeve clothes against burns, when handling molten polymer.

9. Physical and chemical properties

APPEARANCE etc.	:	Pellet
BOILING POINT	:	Not applicable
VAPOUR PRESSURE	:	Not applicable
VOLATILITY	:	Not applicable
INITIAL BOILING POINT	:	Not applicable
SUBLIMATION	:	None
MELTING POINT	:	335℃~345℃
DENSITY	:	1.61
SOLUBILITY	:	Insoluble in water
FLASH POINT	:	No finding
IGNITION POINT	:	540℃ or higher
EXPLOSION PROPERTY	:	Not applicable
INFLAMMABILITY	:	It is flammable, but shows self-fire extinguishing characteristics when kept away from flame.
REACTIVITY WITH WATER	:	None
OXIDIZABILITY	:	None
SELF-REACTIVITY	:	None
DUST EXPLOSIVENESS	:	No finding

10. Stability and reactivity

STABILITY AND REACTIVITY	:	Stable for normal storage or handling.

11. Toxicological information

SKIN CORROSION/IRRITATION	:	No finding.
SERIOUS EYE DAMAGE/IRRITATION	:	Gas generated in drying or melting is irritating eyes and skins.
RESPIRATORY OR SKIN SENSITISATION	:	No finding
ACUTE TOXICITY(INCLUDING LD50)	:	No finding.
SUBACUTE TOXICITY	:	No finding.
CHRONIC TOXICITY	:	No finding.
CARCINOGENECITY	:	No finding.
MUTAGENECITY(Micro organisms, chromosomal aberration)	:	No finding.
REPRODUCTIVE TOXICITY	:	No finding.
TERATOGENICITY	:	No finding.
OTHERS(Including generation of hazardous gases by reaction with water, for example)	:	No finding in this report means that there will be no hazard in general, but no proving data available at the time of reporting.
OTHER CAUTIONS	:	With regard to dust, the maximum permissible concentration and limits are fixed by OSHA and ACGIH.
OTHER CAUTIONS 2	:	Information on hazards of glass fibers as filler.

〈Effects on Human Bodies〉

(1) Effects on skin

Stimulation to the skin with glass fibers may be caused when glass fibers diameter is larger than 4.5~5 μm. They give mechanical stimulation followed by itchiness to the skin, but further continuous exposure reportedly results in extinction of stimulation. It may sometimes leads to irritable dermatitis complicated with urticaria or eczema-like reaction. It is, however reported that such dermatitis is not so serious in general and does not last too long. Therefore, skin stimulation can be prevented by proper use of glass fibers.

(2) Effects on Tumor

Investigations made on glass fibers till today reveal that there is neither increase in mortality of glass fiber production workers due to lung cancer or mesothelioma nor such cases reported.

〈Animal Test Report〉

It is suggested that carcinogenecity of mineral fibers is dependent on their shapes rather than on their constituents. According to a report on experiments using 17 kinds of artificial mineral fibers in various sizes prepared by Dr.Stanton of National Cancer Institute, in USA, statistical studies on correlations between the diameter and length of fibers and the coincidence of mesothelioma have revealed that mineral fibers having a diameter smaller than 0.25 μm and a length larger than 8 μm are closely related to the coincidence of cancers. Since these experiments were performed by artificially dosing the subject animals with a large quantity of glass fibers and consequently they are quite different from the actual exposures to human bodies, it is told to be problematic to make a conclusion that mineral fibers are hazardous to human health, basing on the results obtained from these experiments. Up to the present time, there is no result obtainable to demonstrate a mechanism of glass fibers causing lung cancers in spite of experiment by long exposure to glass fibers with high concentration.

12. Ecological information		
BIODEGRADABILITY	:	No finding.
BIOACCUMULATION	:	No finding.
FISH TOXICITY	:	No finding.
HAZARDS TO OZONE LAYER	:	None
13. Disposal considerations		
WASTE FROM RESIDUES	:	This is designated as waste plastics among industrial wastes by the Wastes Disposal Law. Disposal waste pellets through licensed wastes handlers or local autonomous bodies if they are handling wastes disposal.
WASTE FROM RESIDUES 2	:	When disposed by incineration, use the well controlled incinerators in accordance with the Wastes Disposal Law, Air Pollution Control Law and Water Pollution Prevention Law.
14. Transport information		
UN CLASSIFICATION NUMBER	:	Not applicable
OTHER CAUTIONS	:	Handle with care so as not to give damages to containers or not to be subjected to wetting.
OTHER CAUTIONS 2	:	Secure the containers firmly so as not to cause collapsing.
15. Regulatory information		
WASTE DISPOSAL LAW	:	Waste plastics among industrial wastes.
16. Other information		
HANDLING OF THE DETAILS GIVEN ABOVE	:	This SDS is the English version translated from the Japanese SDS which is prepared for domestic use. Details given above are based on references, information and data available at this moment, but no warranty can be made on exactness of these details. They are also prepared on the assumption that the product will be handled in a normal way. For special handling, adequate safety and environmental measures should be taken in respect to its applications. Our products are not specifically intended for implants for medical and dental applications, and therefore they are not recommended for such applications. "No finding" in this report means that there will be no hazard in general, but no proving data is available at the time of reporting.
WHERE TO CALL FOR FURTHER INFORMATION	:	Polyplastics Co. , Ltd. Quality Assurance Dept. Tel. No 03-6711-8605

*LAPEROS® is a registered trademark of Polyplastics Co., Ltd. in Japan and other countries.

反馈与建议：