



BATTERY TECHNOLOGY SOURCE CO., LTD
www.btscl.com

OTHER MACHINES AND BATTERY PARTS



OTHER MACHINES AND MATERIAL PARTS



BVS-300HV
ELECTRODYNAMIC VIBRATION
TESTER



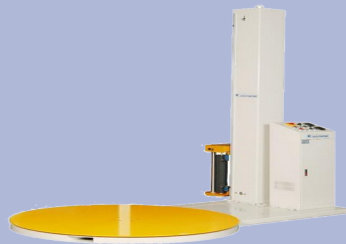
BV-5060
MECHANICAL TYPE VIBRATION
TESTER



BOP-10AM
FULLY AUTO. OVEN TUNNEL MA-
CHINE



CONTAINER PRINTING ASS. LINE
FULLY AUTO. BATTERY CONTAINER
HOLE PUNCHING & SCREEN PRINT-
ING ASSEMBLY LINE



WSV-1521 & 1821
VERTICAL WRAPPING MACHINES



BLT-40C
LOW TEMPERATURE BOX FOR BAT-
TERY QUALITY TEST LABORATORY



GLASS FIBER SEPARATOR



BCF-16MCP
CHARGER MACHINE FOR PLATES
FORMATION RECTIFIER



BATTERY TERMINAL BOLT & NUT



SCISSOR PALLET TABLE



PLASTIC INJECTION MOLD



**CAR & MOTORCYCLE BATTERY
CONTAINER SET**

PLATE MANUFACTURING MACHINES



PS-40 AM
FULLY AUTO. LUG BRUSHER MA-
CHINE



PCS-20AH
FULLY AUTO. MULTIFUNCTION LEAD
PARTS CASTING MACHINE



BGC-10
FULLY AUTO. GRID CASTING MA-
CHINE



BSB-3S
FULLY AUTO. CAR BATTERY PLATE
BRUSHING & SLITTING MACHINE



BIGO-10
INTER GAS OVEN NEGATIVE PLATES
DRY CHARGE OVEN



BPP-10
FULLY AUTO. PLATES PASTING MA-
CHINE



FDO-10
BATTERY PLATES HORIZONTAL
FLASH DRYING OVEN



AHBF-10AM & BPD-10AM
FULLY AUTO. HOLE PUNCHING &
DUMPING MACHINE (WITH CON-
TAINER FEEDING SYSTEM)



HEP-10AC
FULLY AUTO. PE SEPARATOR WRAP-
PING MACHINE



VGM-10M
SEMAUTO. AGM SEPARATOR WRAP-
PING MACHINE



PCS.20H
SEMAUTO. LEAD PARTS CASTING
MACHINE



BFB-10C
SEMAUTO. 3 SIDES FRAME BRUSH-
ING MACHINE

HIGH SPEED MOTORCYCLE BATTERY ASSEMBLY LINE



HV-50AM (2X)
FULLY AUTO. SHORT CIRCUIT TEST, INTER-CELL WELD & WELD QUALITY CHECK MACHINE



HV-60AM (E)
FULLY AUTO. POLARITY CHECK, INTER-CELL WELD, S/C & WELD QUALITY CHECK MACHINE



HV-60AM (X)
FULLY AUTO. POLARITY CHECK, INTER-CELL WELD, S/C & WELD QUALITY CHECK MACHINE (WITH SERVO CONTROL)



IRT-10AM (X)
FULLY AUTO. WELD CONDITION CHECKING MACHINE



HM-10AM
FULLY AUTO. HEAT SEALING MACHINE



HM-10AM (X)
FULLY AUTO. HEAT SEALING MACHINE (QUICK MOLD CHANGE)



ATC-30AM (X)
FULLY AUTO. AIR LEAK TESTING & CODING MACHINE



AHS-10AM
FULLY AUTO. ALUMINUM FOIL TOP SEAL MACHINE



AHS-20AM (X)
FULLY AUTO. ALUMINUM FOIL TOP SEAL & SIDE SEAL MACHINE



TIG-10AM
FULLY AUTO. TIG WELDING MACHINE



BD-10AM
FULLY AUTO. BATTERY DUMPING MACHINE



BSP-10AM
FULLY AUTO. SCREEN PRINTING & CONTAINER ROTATOR MACHINE

HIGH SPEED CAR BATTERY ASSEMBLY LINE



HPVT-40ACH
FULLY AUTO. ELECTRIC WELDING & SHORT TEST MACHINE



IRV-20ACX
FULLY AUTO. S/C TEST & WELD CONDITION CHECKING MACHINE



HM-20ACH
FULLY AUTO. HEAT SEALING MACHINE



ATC-20ACH
FULLY AUTO. LEAK TESTING & CODING MACHINE



TBP-20AC
FULLY AUTO. POST BURNING MACHINE



AHB-10AC
FULLY AUTO. FOIL SEALING & POST BRUSHING MACHINE



IRT-10AC
FULLY AUTO. WELD CONDITION CHECKING MACHINE



AH-10AC
FULLY AUTO. ALUMINUM FOIL SEALING MACHINE



AHB-10AC
FULLY AUTO. HEAT SEALING MACHINE (SERVO MOTOR CONTROL)



HMT-10CX
SEMI-AUTO. TOP COVER HEAT SEALING MACHINE



AH-10AC
SEMI-AUTO. AIR LEAK TESTING MACHINE



HM-10ACX
SEMI-AUTO. HEAT SEALING MACHINE

ACID FINISHING LINE



BCM-AF-20AC

FULLY AUTO. CAR BATTERY ACID FILLING MACHINE



BCM-AFL-20AC

FULLY AUTO. CAR BATTERY ACID LEVEL ADJUSTING MACHINE



HM-10CS

SEMI-AUTO. SECONDARY LID HEAT SEAL MACHINE



BWD-10AC

FULLY AUTO. CAR BATTERY WASHING & DRYING MACHINE



PB-20AC

FULLY AUTO. CAR BATTERY TERMINAL POST BRUSHING MACHINE



BHRD-1000A-AC

FULLY AUTO. CAR BATTERY HRD INSPECTION MACHINE



BHRD-1500 (2)AC

HIGH RATE DISCHARGE INSPECTION MACHINE



BL-20AC

FULLY AUTO. CAR BATTERY LABELING MACHINE



ABF-10MS (V)

SEMI-AUTO. VACUUM TYPE ACID FILLING MACHINE



BCF-8MC

BATTERY CASE FORMATION CHARGER MACHINE



BHRD-300RDS (AM)

FULLY AUTO. 4 FUNCTION BATTERY DISCHARGE INSPECTION MACHINE



ABF-10MS (X)

SEMI-AUTO. ACID BOTTLE FILLING MACHINE



LABORATORY AND TESTING EQUIPMENT



BATTERY TECHNOLOGY SOURCE CO., LTD.

HVT-100

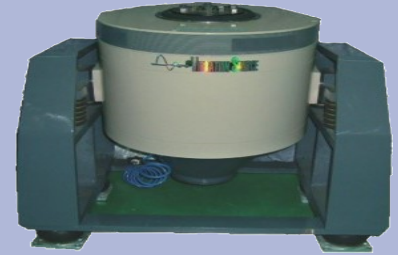
HIGH VOLTAGE BATTERY SHORT
CIRCUIT TESTER



BATTERY TECHNOLOGY SOURCE CO., LTD.

VS-600VH

VIBRATION TESTING SYSTEM



VS-300VH

VIBRATION TESTING SYSTEM



BATTERY TECHNOLOGY SOURCE CO., LTD.

VS-5060M

REACTIVE TYPE VIBRATION TESTER



BATTERY TECHNOLOGY SOURCE CO., LTD.

BTS-LT 403T

LOW TEMPERATURE BOX



BATTERY TECHNOLOGY SOURCE CO., LTD.

NTHDR20/200

MULTI-FUNCTION DISCHARGE
TESTER



NT6CCDR20/50

MULTI-FUNCTION CHARGER AND
DISCHARGER



BATTERY TECHNOLOGY SOURCE CO., LTD.

BHRD-1000A-AC

AUTO. BATTERY HIGH RATE DIS-
CHARGE INSPECTION MACHINE



BATTERY TECHNOLOGY SOURCE CO., LTD.

BHRD-300RDS (AM)

CAPACITY TESTING DEVICE



NTCDR230/80BP-16CH-5C

CAPACITY TESTING DEVICE



NTCDR230-80-5C-16CH

MULTI-FUNCTION TESTING MCHINE
FOR SMALL BATTERIES



NTCDR-150-80-150-10CH

DICHARGE TEST MACHINE

PLASTIC INJECTION MOLD



Functions

Used for producing car, motorcycle, industrial and VRLA battery container and lid sets.

Features

- Material: P-20
- Cold runner system (hot runner at the customer's request)
- CNC processing system to achieve the highest precision.
- 30 years of experience in injection mold design and manufacturing
- Samples are sent to the customer for check and approval before shipping.
- Designed with quick adjustment and ease of operation in mind.



HD TYPE PLATE FILTER PRESS Model: FP-005

Functions

In the plate filter press, dewatering is accomplished by separating the water from the sludge under high pressure. The sludge is pumped into the filter press chambers and the filtrate is pressed through the filter clothes as pumping pressure increases. The dewatered sludge is retained inside the press chambers and moved as a sludge cake after a press run.



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Purpose

Liquid/solids separation through pressure filtering

Applications

- Chemical product processing: solvents and process solution clarification
- Stone/clay/ceramic processing industry
- Metal finishing waste, oil field slurry
- Tanning/leather processing
- PC board/electroplating industry
- Food and beverage processing

Features

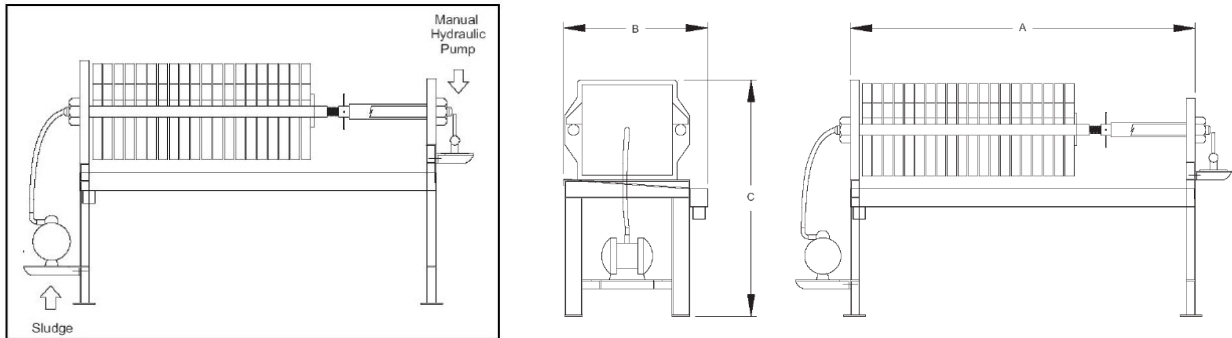
- Mobile and integrated modular design
- No chemical additives/polymer needed
- The pressed sludge cake is collected and conveyed to a dedicated location.
- Applicable to various sludge processing applications

Characteristics

- Pressurize the filter plate by manual hydraulic pump (maximum: 10,000 psi).
- Manual operation to open each filter plate chamber.
- Durable rubber filter plates for light, medium and high tension operations

- Simple structure, easy maintenance: no power needed, cost-effective operation

Equipment process, drawings and section views



Specifications

Model	Chamber (No.)	Filter area (m ²)	Filter volume. (L)	Power	Dimensions A x B x C (mm)
HD-50-10	10	4.7	63.4	Manual hydraulic pump	1300 x 760 x 1000
HD-50-15	15	7.0	95.2		1600 x 760 x 1000
HD-50-20	20	9.4	126.9		1900 x 760 x 1000
HD-50-25	25	11.7	158.7		2200 x 760 x 1000
HD-50-30	30	14.0	190.4		2500 x 760 x 1000
HD-50-35	35	16.5	221.9		2800 x 760 x 1000
HD-50-40	40	18.8	253.8		3100 x 760 x 1000
HD-50-45	45	21.2	285.5		3400 x 760 x 1000
HD-50-50	50	23.5	317.2		3700 x 760 x 1000
HD-50-55	55	25.9	348.7		4000 x 760 x 1000
HD-50-60	60	28.2	380.6		4300 x 760 x 1000
HD-50-65	65	30.6	412.3		4600 x 760 x 1000
HD-50-70	70	32.9	443.8		4900 x 760 x 1000



SEMIAUTO. ULTRASONIC WELDING MACHINE

Model: BU-10M

Functions

The ultrasonic welding machine uses the frequency friction to produce instant heat. When this heat is strong enough for welding, the ultrasonic emitter will stop while the welded piece is solidified after melting to complete the process.

Operation process

After the required adjustment and pre-welding procedures, the selection switch is turned to "AUTO" mode so that the machine can proceed to automatically weld one piece at a time.

Features

- Solid construction and large size make this machine dependable and easy to operate.
- Innovative electric lift platform
- Outstanding vibrator system with three-in-one micro-adjusting, piston and actuator control, making make it a snap to set up.

Specifications

- Output power: 2600 W
- Frequency: 15 KHz
- Welding time control: 0.01-9.9 sec

Machine outlook

- Dimensions: approx. 650 (L)
× 415 (W) × 1,180 (H) mm
- Weight: approx. 110 kg



BATTERY TECHNOLOGY SOURCE CO., LTD.



AUTO. VERTICAL WRAPPING MACHINE

Models: WSV-1521/WSV-1821

Functions

Pallet film wrapping using an automatic rotating table system.

Features

- Modular structure.
- PLC and inverter control.
- Manual or automatic operation.
- Automatic height sensor.
- Chain driven turntable
- Easily adjustable turntable and up/down speed.
- An electromagnetic brake regulates film length.
- An optional pre-stretch system allows to increase efficiency.
- Soft start and stop for enhanced product safety.
- Designed for easy transport, without the need to dismantle the machine.



Model	WSV-1521	WSV-1821
Function	Auto. wrapping machine	
Power supply	3Ø 220 V/380 V/415 V/440 V 50/50 Hz	
Power consumption	1.2 W	
Film height	2100 mm	
Turntable diameter	1500 mm	1800 mm
Turntable height	80 mm	
Turntable speed	5-15 RPM (adjustable)	
Film specifications	PE film Internal diameter: 76 mm External diameter: 350 mm Length: 550 mm	
Film width	17-35 µ	
Size	2623 × 1500 × 2410 mm	2623 × 1800 × 2410 mm



SCISSOR PALLET LIFTER TABLE



BATTERY TECHNOLOGY SOURCE CO., LTD.

Functions

- 2 TON capacity
- Control switch: optional foot push button or hand push button control

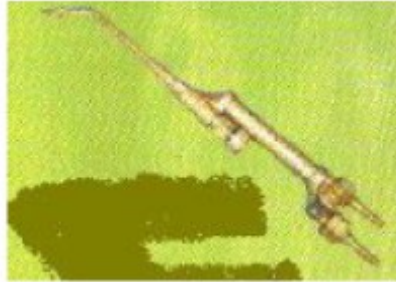
Machine outlook

- Table Size: 1000 × 1300 mm
- Minimum height: 200mm
- Maximum height: 1000 mm
- Vertical travel: 800 mm
- Table weight: 388 kg

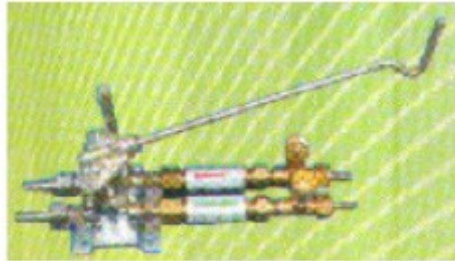
Torch lighter
Type: AQ-PH20001



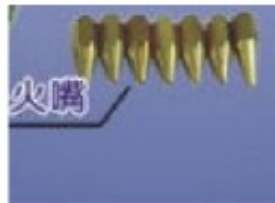
Micro torch
Type: AN-SS



Gas saver
Type: AQ-LPGSAVER



Micro torch nozzle
Type: AN-SS 15



Flashback arrestor
Type: AE-LPGGW





TECHNICAL DATA SHEET

Model: Li-Bond XE205-2 B/H

Li-Bond 205-2B/H is a two component epoxy adhesive for ABS and lead terminal in sealed lead-acid batteries.

Features

- Excellent electrolyte resistance
- Slight solubility of chlorine ion into the electrolyte
- Fast curing
- Mild smell (solvent-like odor)
- Good adhesion to ABS resin and lead

Use

- Sealing and bonding the container to the terminal.
- For sealed lead-acid batteries made of ABS resin or AS resins.

Characteristics

Item	Li-Bond XE205-2B	Li-Bond XE205-2H
Main components	Epoxy resin	Modified aromatic polyamine
Appearance	Pale yellow liquid	Brown liquid
Viscosity (cP/20°C)	1850±400	1100±300
Specific gravity (20°C)	1.15±0.02	1.14±0.02
Mixing ratio by weight	100	50
Pot life (minutes)	12-14 (25°C · 100 g)	
Gelation time (minutes)	18-20 (25°C · 100 g)	

Performance

Item	Values	Test method
Tensile shear strength (kg/cm ²) ABS to ABS	> 70 B	JIS K 6850
Sulfuric acid strength (%)	0.7	60°C × 5 days H ₂ O ₄ (d=1.33)
Hardness (shore D)	80	JIS K 7215



Usage

Mix 100 parts base resin with 50 parts hardener, stir until homogeneous. Please use a dispenser if possible.

Handling precautions

- Stir before using (base resin and hardener may precipitate in the storing period).
- The mixture should be used within the product's pot life.
- Avoid any impacts, vibration or water contact to allow the reaction to last long enough so that the seal can be handled.
- Avoid contact with moisture, keep the container tightly closed.
- Low skin irritation factor; however, skin trouble may issue from direct contact or breathing.
- The workplace shall be well ventilated.
- Wear a protective glove and apron while handling.
- In case of skin exposure, wash the affected area with soap and water immediately.
- In case of eye exposure, flush with water for a least 10 minutes and consult a physician.
- Store in a designated location.
- Avoid all sources of ignition, like heat, sparks, flames, etc. Otherwise it may ignite and burn.
- Flash point:
 - Base resin: 172°C
 - Hardener: 100°C

Packaging

- Li-Bond XE205-2B Base Resin: 15 kg/can
- Li-Bond XE205-2B Hardener: 15 kg/can



TECHNICAL DATA SHEET

Model: Li-Bond XE205-1 B/H

Li-Bond 205-1B/H is a two component epoxy adhesive for ABS and lead terminal in sealed lead-acid batteries.

Features

- Excellent electrolyte resistance
- Slight solubility of chlorine ion into the electrolyte
- Fast curing
- Mild smell (solvent-like odor)
- Good adhesion to ABS resin and lead

Use

- Sealing and bonding the container to the terminal.
- For sealed lead-acid batteries made of ABS resin or AS resins.

Characteristics

Item	Li-Bond XE205-1B	Li-Bond XE205-1H
Main components	Epoxy resin	Modified aromatic polyamine
Appearance	Clear liquid	Brown liquid
Viscosity (cP/20°C)	3000±600	1500±500
Specific gravity (20°C)	Approx. 1.15	Approx. 1.13
Mixing ratio by weight	100	50
Pot life (minutes)	Approx. 8 (25°C · 100 g)	
Gelation time (minutes)	Approx. 8 (25°C · 100 g)	

Performance

Item	Values	Test method
Tensile shear strength (kg/cm ²) ABS to ABS	50 B	JIS K 6850
Sulfuric acid strength (%)	1.0	60°C × 5 days
Hardness (shore D)	83	JIS K 7215



Usage

Mix 100 parts base resin with 50 parts hardener, stir until homogeneous. Please use a dispenser if possible.

Handling precautions

- Stir before using (base resin and hardener may precipitate in the storing period).
- The mixture should be used within the product's pot life.
- Avoid any impacts, vibration or water contact to allow the reaction to last long enough so that the seal can be handled.
- Avoid contact with moisture, keep the container tightly closed.
- Low skin irritation factor; however, skin trouble may issue from direct contact or breathing.
- The workplace shall be well ventilated.
- Wear a protective glove and apron while handling.
- In case of skin exposure, wash the affected area with soap and water immediately.
- In case of eye exposure, flush with water for a least 10 minutes and consult a physician.
- Store in a designated location.

Packaging

- Li-Bond XE205-1B Base Resin: 15 kg/can
- Li-Bond XE205-1B Harder: 5 kg/can



TECHNICAL DATA SHEET

Model: Li-Bond XE209-12 BB/BR

Li-Bond 209-12 is a two component epoxy adhesive for ABS and lead terminal in sealed lead-acid batteries.

Features

- Excellent electrolyte resistance
- Slight solubility of chlorine ion into the electrolyte
- Fast curing
- Mild smell (solvent-like odor)
- Good adhesion to ABS resin and lead

Use

- Sealing and bonding the container to the terminal.
- For sealed lead-acid batteries made of ABS resin or AS resins.

Characteristics

Item	Li-Bond XE209-12BB/BR Base Resin	Li-Bond XE205-1YH Hardener
Main components	Epoxy resin	Modified aromatic polyamine
Appearance	Back (red) liquid	Brown liquid
Viscosity (cP/20°C)	Approx. 2500	Approx. 400
Specific gravity (20°C)	Approx. 1.15	Approx. 1.13
Mixing ratio by weight	2	1
Pot life (minutes)	Approx. 30 (25°C · 90 g)	
Gelation time (minutes)	Approx. 50 (25°C · 90 g)	

Performance

Cure condition: 40 minutes at 60°C

Item		Values	Test method
Tensile shear strength (kg/cm ²)	ABS to ABS	45 B	JIS K 6850
Sulfuric acid strength (%)		1.0	60°C x 5 days



Hardness (Shore D)	80	JIS K 7215
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Usage

Mix 100 parts base resin 50 parts hardener, stir until homogeneous. Please use a dispenser if possible.

Handling Precautions

- The mixture should be used within the product's pot life.
- Avoid any impacts, vibration or water contact to allow the reaction to last long enough so that the seal can be handled.
- Avoid contact with moisture, keep the container tightly closed.
- Low skin irritation factor; however, skin trouble may issue from direct contact or breathing.
- The workplace shall be well ventilated.
- Wear a protective grove and apron while handing.
- In case of skin exposure, wash the affected area with soap and water immediately.
- In case of eye exposure, flush with water for a least 10 minutes and consult a physician.
- Store in a designated location.
- Shut off all sources of ignition: no flammers, smoking or flames; when exposed to a flame, this product will ignite and burn.
- Flash point: base resin (172°C), hardener (100°C)

Packaging

- Li-Bond XE209-12BB/BR Base Resin: 20 kg/can
- Li-Bond XE205-1YH Hardener: 20 kg/can



TECHNICAL DATA SHEET

Model: Li-Bond 3100BB/BR/YH

Li-Bond 3100BB/BR/YH is a two component epoxy adhesive for ABS and lead terminal in sealed lead-acid batteries.

Features

- Excellent electrolyte resistance
- Slight solubility of chlorine ion into the electrolyte
- Fast curing
- Mild smell (solvent-like odor)
- Good adhesion to ABS resin and lead

Use

- Sealing and bonding the container to the terminal.
- For sealed lead-acid batteries made of ABS resin.

Characteristics

Item	Li-Bond 3100BB/BR Base Resin	Li-Bond 3100YH Hardener
Main components	Epoxy resin	Modified aromatic polyamine
Appearance	Back/red liquid	Brown liquid
Viscosity (m.Pas/20°C)	3000±600	500±100
Viscosity (m.Pas/25°C)	2000±500	400±100
Specific gravity (25°C)	1.14±0.02	1.13±0.02
Mixing ratio by weight	2	1
Pot life (minute/RT)	30±5 (25°C, 100 g)	
Gelation time (minute/rt)	40±5 (25°C, 100 g)	

Performance

Item	Values	Test method
Tensile shear strength (kg/cm ²) ABS to ABS	80 B	JIS K 6850



Sulfuric acid strength (%)	1.0	60°C x 7 days H ₂ SO ₄ (d=1.33)
Hardness (Shore D)	80	JIS K 7215

Usage

Mix 100 parts base resin with 40 parts hardener, stir until homogeneous. Please use a dispenser if possible.

Handling precautions

- Stir before using (base resin and hardener may precipitate in the storing period).
- The mixture should be used within the product's pot life.
- Avoid any impacts, vibration or water contact to allow the reaction to last long enough so that the seal can be handled.
- Do not mix with base resin and hardener, keep in a tightly closed container.
- Low skin irritation factor; however, skin trouble may issue from direct contact or breathing.
- The workplace shall be well ventilated.
- Wear a protective grove and apron while handing.
- In case of skin exposure, wash the affected area with soap and water immediately.
- In case of eye exposure, flush with water for a least 10 minutes and consult a physician.
- Store in a designated location.
- Avoid all sources of ignition, like heat, sparks, flames, etc. Otherwise it may ignite and burn.
- Flash point:
 - Base resin: 172°C
 - Hardener: 100°C

Packaging

- Li-Bond 3100BB/BR Base Resin: 15 kg/can
- Li-Bond 3100YH Hardener: 15 kg/can



TECHNICAL DATA SHEET

Model: Li-Bond 5199BR (B)/H

Li-Bond 5199BB (R)/H is a two component epoxy adhesive for ABS and lead terminal in sealed lead-acid batteries.

Features

- Excellent electrolyte resistance
- Slight solubility of chlorine ion into the electrolyte
- Fast curing
- Mild smell (solvent-like odor)
- Good moisture tolerance
- Low tendency to blush and low susceptibility to carbonation
- Very low crystallization
- Low volatility
- Good adhesion to ABS resin and lead

Use

- Sealing and bonding the container to the terminal.
- For sealed lead-acid batteries made of ABS resin or AS resins.

Characteristics

Item	Li-Bond 5199BB (R) Base Resin	Li-Bond 5199H Hardener
Main components	Epoxy resin	Aliphatic amine
Appearance	Black (red) liquid	Light yellow liquid
Viscosity (cP/20°C)	5600±500	750±150
Viscosity (cP/25°C)	3000±300	400±50
Specific gravity (25°C)	Approx. 1.15	Approx. 1.13
Mixing ratio by weight	100	40
Use condition	60-65°C x 40-60 min	
T _g	83°C	
Pot life (minute/RT)	20	



Gelation time (minute/rt)	30
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Performance

Item		Values	Test method
Tensile shear strength (kg/cm ²)	ABS to ABS	114 B	JIS K 6850
Sulfuric acid strength (%)		1..6	70°C x 7 days
Hardness (Shore D)		87	JIS K 7215

Usage

Mix 100 parts base resin with 40 parts hardener, stir until homogeneous. Please use a dispenser if possible.

Handling precautions

- Stir before using (base resin and hardener may precipitate in the storing period).
- The mixture should be used within the product's pot life.
- Avoid any impacts, vibration or water contact to allow the reaction to last long enough so that the seal can be handled.
- Do not mix with base resin and hardener, keep in a tightly closed container.
- Low skin irritation factor; however, skin trouble may issue from direct contact or breathing.
- The workplace shall be well ventilated.
- Wear a protective grove and apron while handing.
- In case of skin exposure, wash the affected area with soap and water immediately.
- In case of eye exposure, flush with water for a least 10 minutes and consult a physician.
- Store in a designated location.

Packaging

- Li-Bond 5199BB (R) Base Resin: 15 kg/can
- Li-Bond 5199H Hardener: 5 kg/can



TECHNICAL DATA SHEET

Model: Li-Bond 5199B/H

Li-Bond 5199B/H is a two component epoxy adhesive for ABS and lead terminal in sealed lead-acid batteries.

Features

- Excellent electrolyte resistance
- Slight solubility of chlorine ion into the electrolyte
- Fast curing
- Mild smell (solvent-like odor)
- Good moisture tolerance
- Low tendency to blush and low susceptibility to carbonation
- Very low crystallization
- Low volatility
- Good adhesion to ABS resin and lead

Use

- Sealing and bonding the container to the terminal.
- For sealed lead-acid batteries made of ABS resin or AS resins.

Characteristics

Item	Li-Bond 5199B Base Resin	Li-Bond 5199H Hardener
Main components	Epoxy resin	Aliphatic amine
Appearance	Black (red) liquid	Light yellow liquid
Viscosity (cP/20°C)	5600±500	750±150
Viscosity (cP/25°C)	3000±300	400±50
Specific gravity (25°C)	Approx. 1.15	Approx. 1.13
Mixing ratio by weight	100	40
Use condition	60-65°C x 40-60 min	
T _g	82°C	
Pot life (minute/RT)	20	



Gelation time (minute/rt)	30
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Performance

Item		Values	Test method
Tensile shear strength (kgf)	ABS to ABS	120 B	JIS K 6850
Sulfuric acid strength (%)		1.58	70°C x 7 days
Hardness (Shore D)		89	JIS K 7215

Usage

Mix 100 parts base resin with 40 parts hardener, stir until homogeneous. Please use a dispenser if possible.

Handling precautions

- Stir before using (base resin and hardener may precipitate in the storing period).
- The mixture should be used within the product's pot life.
- Avoid any impacts, vibration or water contact to allow the reaction to last long enough so that the seal can be handled.
- Do not mix with base resin and hardener, keep in a tightly closed container.
- Low skin irritation factor; however, skin trouble may issue from direct contact or breathing.
- The workplace shall be well ventilated.
- Wear a protective glove and apron while handling.
- In case of skin exposure, wash the affected area with soap and water immediately.
- In case of eye exposure, flush with water for a least 10 minutes and consult a physician.
- Store in a designated location.

Packaging

- Li-Bond 5199B Base Resin: 15 kg/can
- Li-Bond 5199H Hardener: 5 kg/can