



<p align="center">TEST REPORT UL 9540B:2024 TUV SUD Test Report for Fire Propagation Test – Test Method for Outline of Investigation for Large-Scale Fire Test for Residential Battery Energy Storage Systems</p>			
Report No.:	5061924025710-00		
Date of issue:	2026-06-12		
Project handler:	Zhu, Jiacheng		
Testing laboratory:	TÜV SÜD New Energy Vehicle Testing (Jiangsu) Co., Ltd.		
Address:	Building A, No.15 Factory, Jintong International Industrial Park, No.8, Xihu Road, Wujin National Hi-tech Industrial Development Zone, Changzhou, Jiangsu, China		
Testing location:	Chuweineng Testing Technology (Shanghai) Co., Ltd. Building 3, No. 1065, Beihe Road, Jiading District, Shanghai		
Client:	Shanghai PYTES Energy Co., Ltd.		
Client number:	003364		
Address:	No. 3492 Jinqian Road, Fengxian District, 201406 Shanghai, PEOPLE'S REPUBLIC OF CHINA		
Contact person:	Yang, Lijuan		
Standard:	This TUV SUD test report form is based on the following requirements: UL 9540B:2024 (Issue Number: 1)		
TRF number and revision:	TRF UL 9540B:2024 Rev 0		
eDoc_ID:			
TRF originated by:	TUV SUD NEW ENERGY TESTING (GUANGDONG) CO., LTD., Mrs. Zoey Liu		
Copyright blank test report:	This test report is based on the content of the standard (see above). The test report considered selected clauses of the a.m. standard(s) and experience gained with product testing. It was prepared by TUV SUD Product Service. TUV SUD Group takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.		
General disclaimer:	This test report may only be quoted in full. Any use for advertising purposes must be granted in writing. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production.		
Scheme:	☐ TUV Mark ☐ cTUV Mark (SCC) ☐ TUVus Mark (NRTL) ☐ GS Mark ☐ without certification ☒ other: TÜV SÜD Test Report from witness test ☐ AoC/CoC for EU-Directive / EU-Regulation:		
Compiled by:	Zhu, Jiacheng	Approved by:	Frank, Marco
(+ signature)	<i>Zhu Jiacheng</i>	(+ signature)	<i>Frank, Marco</i>

Non-standard test method:	☒ No ☐ Yes, see details under <i>Summary of testing</i>
National deviations:	N/A
Number of pages (<i>Report</i>):	76
Number of pages (<i>Attachments</i>):	29 (page 48-76)
Test sample:	Batteries
Type of test object:	Rechargeable Li-ion Battery
Trademark:	Pytes
Model and/ or type reference:	V16
Rating(s):	51.2 Vd.c., 314 Ah

Manufacturer:	Shanghai PYTES Energy Co., Ltd.
Manufacturer number:	003364
Address:	No. 3492 Jinqian Road, Fengxian District, 201406 Shanghai, PEOPLE'S REPUBLIC OF CHINA
Name and address of factory(ies)	
Same with Manufacturer above.	

Sub-contractors / tests (clause):	N/A
Name:	N/A
Order description:	☐ Complete test according to TRF
	☐ Partial test according to manufacturer's specifications
	☐ Preliminary test
	☐ Spot check
	☒ Others: Witness test
Date of order:	2024-10-22
Date of receipt of test item:	2026-04-09
Date(s) of performance of test:	2026-04-09 to 2026-04-10

Test item particulars:
According to UL 9540B:2024.

Purpose of the product (description of intended use):
Rechargeable Li-ion Battery, model V16, is intended for use as a wall-mounted residential battery energy storage system for indoor and outdoor installations.

Characteristic data (not shown on the marking plate):	
Product name	Rechargeable Li-ion Battery
Type/model	V16
Nominal voltage	51.2 Vd.c.
Rated capacity	314 Ah
Charging voltage specified by manufacturer	56.8 V
Upper limit charging voltage	-
Charging current specified by manufacturer	125 A
Maximum continuous charging current	200 A
Discharging current specified by manufacturer	150 A
Maximum continuous discharging current	200 A
End of discharge voltage	46.5 V
Standard charging method specified by manufacturer	Charge at constant current 125 A until voltage reaches 56.8 V, then charge at constant voltage 56.8 V till charge current is 9.42 A.
Standard discharging method specified by manufacturer	Discharge at constant current 150 A until voltage reaches 46.5 V
Dimension	L*W*H: (700±2.0) mm*(671±2.0) mm*(260±2.0) mm
Weight	(130.0±1.0) kg
Configuration	16S

Attachments:

Attachment 1: Product description
Attachment 2: Exploding drawing of module & Identification/location of cells within the module
Attachment 3: Pre-conditioning profile
Attachment 4: Photo(s) for sample before test and test setup with thermocouple location
Attachment 5: Photo(s) for sample after test
Attachment 6: Monitored temperature chart
Attachment 7: Flammable gas generation and composition data chart
Attachment 8: Heat release rate versus time data chart
Attachment 9: Summary of Heat release rate

If additional information is necessary, please provide

N/A

Copy of marking plate:

For Rechargeable Li-ion Battery, model: V16

Pytes

Product Model	V16	Modèle de Produit	V16
Battery Type	Rechargeable Li-ion Battery	Type de Batterie	Batterie Li-ion Rechargeable
Operating Voltage Range	46.5Vd.c.~56.8Vd.c.	Plage de Tension de Fonctionnement	46.5Vc.c.~56.8Vc.c.
Nominal Voltage	51.2Vd.c.	Tension Nominale	51.2Vc.c.
Rated Energy	16.07kWh	Énergie Nominale	16.07kWh
Rated Capacity	314Ah	Capacité Nominale	314Ah
Rated Charge/Discharge Current	125A/150A	Courant Nominal de Charge/Décharge	125A/150A
Protection Class	Class I	Classe de Protection	Class I
Ingress Protection Degree	IP66	Indice de Protection	IP66
Short Current/Duration	<2400A/10ms	Courant de Court Circuit/Durée	<2400A/10ms

CAUTION!

IfP74/176/209[16S]E/-20+50/95

- ◆ Do not dispose of batteries in a fire, as they may explode.
- ◆ Do not open or mutilate batteries. The released electrolyte is harmful to the skin and eyes and may be toxic.
- ◆ Batteries can present a risk of electric shock or burns from high short-circuit currents.
- ◆ Failed batteries can reach temperatures exceeding safe touch thresholds for surfaces.

ATTENTION!

IfP74/176/209[16S]E/-20+50/95

- ◆ Ne jetez pas les batteries au feu, car elles pourraient exploser.
- ◆ Ne pas ouvrir ni endommager les batteries. L'électrolyte libéré est corrosif pour la peau et les yeux, et peut présenter une toxicité.
- ◆ Les batteries peuvent présenter un risque d'électrocution ou de brûlures dues aux courants intenses de court-circuit.
- ◆ Les batteries défectueuses peuvent atteindre des températures dépassant les seuils de sécurité thermique pour le contact cutané.

S/N:

Date:



2025-Mar-4



MADE IN CHINA (Fabriqué en Chine)
Shanghai PYTES Energy Co., Ltd.
www.pytesusa.com
pytesusa@pytesgroup.com

Label for warning

DANGER

Danger! Low DC voltage inside
Danger! Arc flash & shock hazard

DANGER ! Basse Tension Continue(DC) interne
DANGER ! Risque d'arc électrique et d'électrocution

Charge the battery every six months to reach 90% SOC, in case of long-term storage.
Recharger la batterie tous les six mois jusqu'à 90% de l'état de charge (SOC) en cas de stockage prolongé.

ATTENTION!

Read the user manual carefully before connecting the wires.
Ensure the grounding connection is properly established before use.
Repairs must be performed by authorized and trained personnel only.
Keep the battery out of reach of children and pets.
Keep the battery away from open flames and flammable materials.
Avoid immersing the battery in or exposing it to water or other liquids.
Avoid exposure to direct sunlight and humid environments.
Do not dismantle the battery unless performed by qualified personnel.
Do not drop, crush, or strike the battery. Do not puncture or cut the battery with sharp objects.
Do not cover or wrap the battery.
Do not place heavy objects on or sit on the battery.
If the battery leaks, catches fire, or is damaged, switch off the breaker on DC side and stay away from the battery.
Contact your supplier immediately within 24 hours of any failure.

ATTENTION!

Lire attentivement le manuel d'utilisation avant de procéder au raccordement des conducteurs des câbles.
S'assurer de la mise à la terre est correctement établie avant toute mise en service.
Toute intervention de maintenance doit impérativement être réalisée par des techniciens certifiés et qualifiés.
Conserver la batterie hors de portée des enfants et des animaux.
Tenir la batterie à l'écart des flammes nues et des matières inflammables.
Éviter toute immersion de la batterie dans l'eau ou tout autre liquide.
Éviter toute exposition directe au soleil et aux environnements humides.
Ne pas démonter la batterie, sauf intervention par un personnel qualifié.
Ne pas laisser tomber, écraser ou heurter la batterie. Éviter tout perçage ou coupure avec des objets tranchants.
Ne pas recouvrir ni envelopper la batterie.
Ne pas placer d'objets lourds sur la batterie ni s'asseoir dessus.
En cas de fuite, d'incendie ou d'endommagement de la batterie: Couper immédiatement le disjoncteur côté continu (DC) et s'éloigner de la batterie.
En cas de dysfonctionnement, veuillez contacter votre fournisseur dans les 24 heures suivant l'incident.



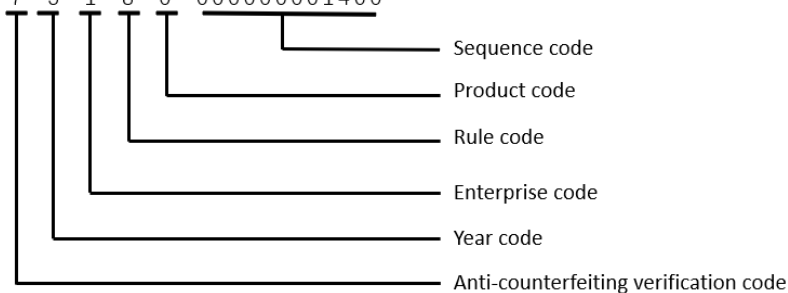
For S/N and Date

**Remark:**

1. “+” and “-” are marked near the connector of the battery.
2. S/N: “7518000000001460”, the interpretation is shown as follows:

Example:

7 5 1 8 0 000000001460



“2025-Mar-4” represents the date of manufacture. It represents the battery manufactured on March 4th, 2025. This is not the manufacture date of actual samples and only for example.

3. The disposal and caution information are in the manual.

Pictures of the product:

Overview of Rechargeable Li-ion Battery, model: V16

