# The Importance of Testing PV Batteries to the IEC 61427 Standard

The International Electrotechnical Commission's (IEC) standard 61427 provides performance criteria that all batteries for PV applications can and should be measured against. IEC testing illustrates that Trojan's Industrial and Premium batteries can withstand extreme operating conditions where continuous deep discharge, recharge, and Partial State of Charge is typical.

## Service Life Expectancy per IEC Standard 61427 Test Results







TROJAN BATTERY
Industrial Line



1-800-423-6569 www.trojanbattery.com

Watch and Learn more about Smart Carbon by viewing our Webinar.
www.trojanbattery.com/multimedia

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Trojan's **PSOC** Intelligent Solution for

**Partial State of Charge Applications** 

TROJAN BATTERY COMPANY, LLC 12380 Clark St, Santa Fe Springs, CA 90670, USA







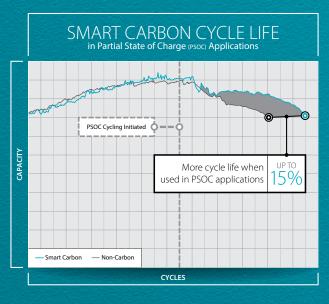
To address the impact of Partial State of Charge (PSOC) on deep-cycle batteries in renewable

energy (RE), Trojan Battery has now included Smart Carbon™ as a standard feature in its Industrial and Premium flooded battery lines.

Operating at PSOC on a regular basis can quickly diminish the overall life of a battery, which results in frequent and costly battery replacements. To address the issue of PSOC, Trojan is the first manufacturer to include a carbon additive as a standard feature to enhance battery life and performance.

## **Smart Carbon provides:**

- → A decrease in the rate of sulfation in PSOC conditions
- > Improved charge acceptance
- Faster recharge in PSOC applications
- High energy efficiency





## INDUSTRIAL LINE 2800 CYCLES @ 50% DOD - 8 YEAR WARRANTY

The Industrial Line is engineered specifically to support renewable energy systems with large daily loads where the batteries are cycled regularly.

### Smart Carbon

Increases the electrochemically active surface area which provides improved charge acceptance and faster recharge in applications where the batteries are under charged on a regular basis.

#### Reinforced Protection Wrap

Protects against shedding and assures the electrochemical performance of the battery's active material.

## Alpha Plus® Paste with T2 Technology™

A proprietary, high-density paste formulation precisely engineered to deliver outstanding battery performance.

## Moss Shield

the battery.

Maxguard® XL Separator Features a wide-channel design that increases acid flow for optimum battery performance.

Protects the separators from damage.
The moss shield increases the battery life by protecting the top of the plates from shorting to the cell strap.

DuraGrid™ Technology

Features a thick grid structure which

effectively increasing the life of

maintains greater corrosion resistance,

|                            | IND9-6V   | IND13-6V  | IND17-6V  | IND23-4V  | IND29-4V  | IND27-2V  | IND33-2V  |
|----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Capacity<br>Amp-Hours (AH) | 6V        | 6V        | 6V        | 4V        | 4V        | 2V        | 2V        |
| 10-Hr Rate                 | 414       | 616       | 820       | 1129      | 1448      | 1368      | 1682      |
| 20-Hr Rate                 | 464       | 695       | 925       | 1270      | 1618      | 1520      | 1849      |
| 100-Hr Rate                | 601       | 902       | 1202      | 1654      | 2105      | 1954      | 2405      |
| Weight lbs. (kg)           | 220 (100) | 315 (143) | 415 (188) | 370 (168) | 465 (211) | 228 (104) | 278 (125) |

## PREMIUM LINE 1600 CYCLES @ 50% DOD - 5 YEAR WARRANTY

Premium batteries are optimized for Renewable Energy applications which operate under challenging conditions such as fluctuating or extreme temperatures, remote locations and the intermittent nature of solar and wind power generation.



A proprietary formula of carbon additives designed to enhance battery life and performance.

#### DuraGrid™ Technology

Specifically designed for the longer life requirements of renewable energy applications.

#### Alpha Plus® Paste with T2 Technology™

Optimizes porosity development in the active material resulting in sustained battery performance over a longer period of time.

#### Maxquard® XL Separator

30 percent thicker than our T2 flooded battery separator and provides even greater resistance to stratification which is typically a mode of failure in batteries used in renewable energy systems.

|                            | T-105 RE | L16RE-A  | L16RE-B  | L16RE-2V |  |
|----------------------------|----------|----------|----------|----------|--|
| Capacity<br>Amp-Hours (AH) | 6V       | 6V       | 6V       | 2V       |  |
| 10-Hr Rate                 | 207      | 299      | 340      | 1021     |  |
| 20-Hr Rate                 | 225      | 325      | 370      | 1110     |  |
| 100-Hr Rate                | 250      | 360      | 410      | 1235     |  |
| WEIGHT lbs. (kg)           | 67 (30)  | 115 (52) | 118 (54) | 119 (54) |  |



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**Partial State of Charge Applications** 



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TRJN0231 • 04/14 — Smart Carbon\_Brochure\_TriFold







Trojan's **PSOC**Intelligent Solution for

Partial State of Charge Applications





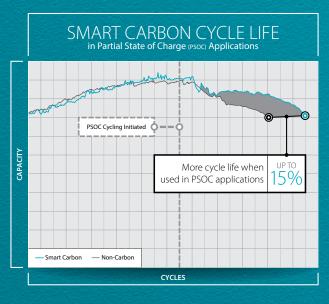
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