

# Deka® Fahrenheit® vs. Pure Lead in Telecom Applications†



There are many claims in the marketplace that tout the advantages of pure lead batteries. Based on lab analysis of the Deka Fahrenheit and Pure Lead product the results are educational and eye opening. As a comparison we also included the analysis of our standard VRLA product. The results were the following:

	DEKA® FAHRENHEIT®	DEKA® UNIGY® I	PURE LEAD
Alloy Materials	>98% Pure Lead with Tin-Calcium	>98% Pure Lead with Tin-Calcium	>99% with Calcium
High Temperature Life Testing (60°C)	2.8X	1X	1.1X
Maximum Operating Temperature	65°C	40°C	50°C
Plate Formation	Exclusive IPF® Technology	Exclusive IPF® Technology	Formed in Jar
Catalyst – lower float current and energy consumption	Yes	No	No
Float Current (96 hours)	1X	3X	6X
Thermal Runaway	≥20 Volts	≥16 Volts	Consult Manufacturer
Container and Cover	THT™ Plastic – optimized for high heat (65°C) and compression	Polypropylene	ABS
Safety Valve	100% tested valve, self sealing	100% tested valve, self sealing	Pressure relief valve
Design Life (@25°C)	12 Years	10 Years	> 10 Years
Warranty	6 Years @ 35°C	4 Years Full, 6 Years Pro-Rata @ 25°C	Consult Manufacturer

## Critical Points:

- **Gassing** – Lower levels of gas increase life by reducing the risk of dry out. The Deka Fahrenheit exhibits a trace amount of gas. ***This is a 69% decrease from our standard VRLA.***
- **Float Current** – Lower float current reduces grid corrosion and energy consumption, increasing long life and performance. ***The pure lead product float current is 6 times greater than the Deka Fahrenheit.***
- **Life** – Long battery life and performance is paramount. In high temperature life testing (60°C), ***the Deka Fahrenheit performed over 2.8 times longer than the life of our standard VRLA and pure lead competitors.***
- **GR-4228** – Deka Fahrenheit is independently validated to 150 unique Telcordia test requirements, not just designed for it.

When compared across all these categories, the Deka Fahrenheit is the best solution to high temperature applications. If you are using or considering pure lead we encourage you to discuss these critical factors with your supplier.

† Based on lab analysis of twelve batteries tested according to industry accepted practices.

# SOME LIKE IT HOT

Beat the heat and reduce cooling costs today. In critical telecommunication and UPS applications, elevated temperatures have always been one of lead-acid battery's more formidable foes, requiring costly cooling systems installation and constant energy demands. Along with the cost associated in purchasing and installing cooling units, there's the continual cost and energy loss from powering these systems. Multiply that by every site, and the expense keeps growing. East Penn is introducing the **Deka® Fahrenheit®**, a revolutionary new battery that will not only beat the heat, but also reduce the cost of these expensive cooling systems.

A breakthrough in a heat-tolerant VRLA monobloc battery design, the new **Deka® Fahrenheit®** survives up to 3 times longer in temperatures of 60°C —far beyond the life of a normal VRLA battery. Innovative features through an exclusive Thermal Management Technology System provide a product that significantly reduces the need for outside plant cooling systems to save considerable cost, conserve energy, and reduce the overall sites CO<sub>2</sub> footprint.

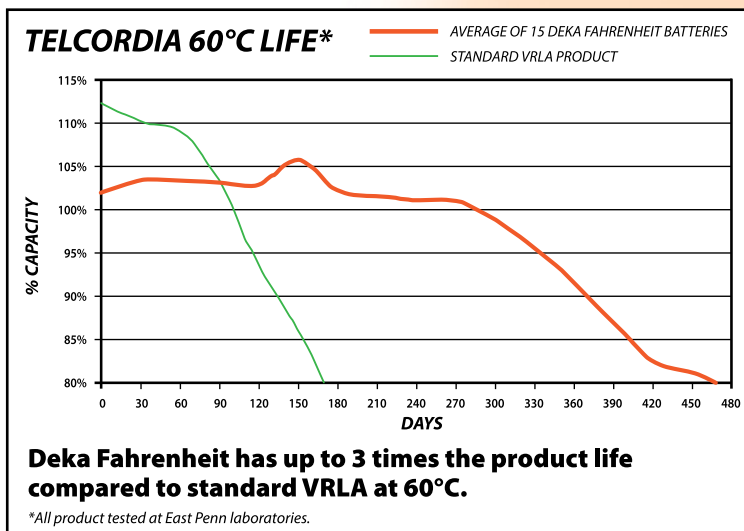


## The Hotlist:

### Exclusive Thermal Management Technology System

- **Helios™ Additive** – Exclusive additive reduces float current up to 75% enhancing high temperature life
- **THT™ Plastic** – Specifically formulated heat resistant plastic case and cover optimizes compression
- **Microcat® Catalyst** – Lowers float current, mitigates thermal buildup and cell dryout
- **IPF® Technology** – Exclusive process optimizes capacity, cell consistency and long term reliability
- **TempX™ Alloy** – Optimized positive alloy inhibits corrosion under the highest temperature extremes
- **Completely Recyclable** – Fully recyclable lead-acid technology to reclaim lead, acid, and plastics

## The Results:



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