

PharmaKeep®

Low RH Oxygen Scavengers

Purpose

To extend the shelf life and efficacy of pharmaceutical, nutraceutical and diagnostic products by protecting against oxygen degradation and oxidative reactions in low relative humidity package environments.

What is it?

PharmaKeep® is an innovative line of polymer-based oxygen scavenging canisters and packets, developed and distributed jointly by Süd-Chemie Performance Packaging, a business unit of Süd-Chemie Group, and Mitsubishi Gas Chemical Company, Inc. (MGC).

Why use it?

Oxidative degradation – besides moisture – is one of the major pathways for degradation of pharmaceuticals and diagnostics during production, isolation processes and storage. Oxidation of proteins, enzymes and active pharmaceutical substances can present significant stability problems affecting efficacy, accuracy and shelf life.

When evaluating drug properties during formulation of pharmaceuticals, the need to address suboptimal physiochemical properties, such as susceptibility to oxidation, can extend time lines and development costs. By addressing oxidative stability with packaging instead of in the drug formulation, time-to-market can be shortened.

Oxygen also causes reactions in many reagents and substrates used in in-vitro diagnostic (IVD) products. By scavenging oxygen, PharmaKeep oxygen absorbers help ensure that diagnostic products remain effective and accurate.

Compared to Metal-Based Systems

Metal based oxygen scavenging systems, such as the iron-oxide packets often used in food applications, require the presence of humidity in order function and often release moisture back into the package environment. Due to the need for water, metal based oxygen scavengers are not suitable for dry applications. PharmaKeep absorbs oxygen at low relative humidity levels.

Unlike some oxygen scavengers, PharmaKeep does not contain bromide.

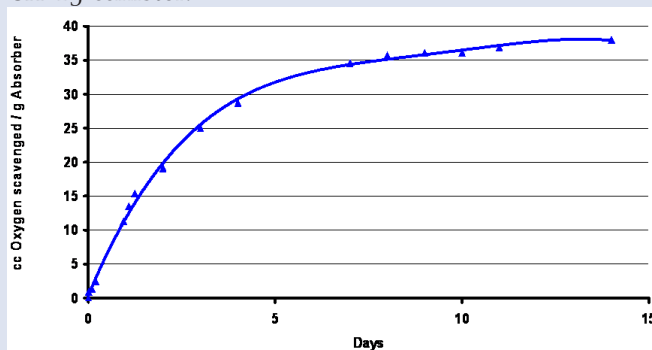


PharmaKeep® oxygen scavengers work in low relative humidity package environments and are available in canister and packet configurations.



Oxygen Absorption Capacity

Oxygen absorption guaranteed capacity: 20 ml of O₂ per CH-1g canister.



Key Advantages

- Functions in low relative humidity environments
- Unlike iron-based systems, does not require moisture to function and does not release moisture back into package environment
- Canisters designed for high speed automatic insertion

PharmaKeep®

Available Configurations

Süd-Chemie offers various configurations of PharmaKeep canisters and packets to accommodate different packaging needs. Canisters are rigid and cylindrical in design and are ideal for automatic, high-speed insertion into pharmaceutical and nutraceutical packaging, typically feeding 300 to 600 canisters per minute. PharmaKeep packets have the same absorbing function as PharmaKeep canisters. Canisters and packets are available in two-in-one moisture and oxygen absorbing configurations (CD and KD). The KH-500 packet is designed for bulk packaging.

Configuration	Adsorption	
	Oxygen Min. Volume in ml of O ₂ per packet or canister (25±2°C, 500 ml air, 7 days)	Moisture Weight in grams of H ₂ O per packet or canister (25±2°C, 75±5%RH, 7 days)
Canisters		
CH-1G	20	-
CH-0.3G	5	
CD-1.8G (with silica gel)	18	.12
CD-2.15G (with silica gel)	22	.15
Packets		
KH-20	20	-
KD-10 (with silica gel)	10	.07
KD-20 (with silica gel)	20	.15
KH-500	500	-



Oxy-Guard™ Barrier Packaging

PharmaKeep functions optimally in high gas barrier packaging. Süd-Chemie offers a full line of its Oxy-Guard™ barrier bottles that, along with PharmaKeep oxygen scavengers, offer a full packaging solution for oxygen sensitive pharmaceutical products. Bottles range in size from 40ml to 1500 ml, all with a standard SP 400 neck finish.



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