

Technical Note

Chemcassette® Handling, Storage and Use

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The Chemcassette® is the colorimetric-based sensor used by your MDA gas monitoring system to detect and measure toxic gases. It consists of a special substrate that has been coated with proprietary chemical formulations that produce a color reaction in dry form when exposed to a specific gas or family of gases. Chemcassettes® are extremely sensitive and specific to the gas or gases they are designed to detect. As a result, they are a fast, accurate, virtually interference-free detection method.

Each step of the Chemcassette® production process is carefully controlled to assure that the Chemcassette® will perform as intended in your MDA monitoring system. Each and every Chemcassette® batch is dynamically tested according to NIOSH methodologies with a gas it is designed to detect and the results are carefully documented. Our ISO 9001 quality control standards are strict enough to meet rigorous U.S. Nuclear Regulatory Commission audit requirements. Each step in the manufacturing and testing process is fully documented and traceable to a National Institute of Standards and Technology (NIST) standard through the serial number assigned to each Chemcassette®.

The following simple guidelines for handling, shipping, storage and use of MDA Chemcassettes® are recommended to ensure optimum performance of your MDA Chemcassette®-based monitor. By following these guidelines you can be assured of the fast, sensitive response and low maintenance for which the Chemcassette® System is well known.

Handling

MDA Chemcassettes® are non-toxic and require no special precautions to protect you or your fellow workers. There is no need for special transportation or disposal procedures. The Chemcassette® is excluded from reporting requirements under the terms of the OSHA Hazard Communication Standard since it is designed for a particular end-use function and will not release, or otherwise result in exposure to hazardous chemicals under normal use. Therefore, Material Safety Data Sheets (MSDS) are not required. Since oils and acids present in your skin may react with the reagents in the tape and cause it to change color, we recommend that gloves be worn when handling. As a precaution, keep hands away from your eyes and mouth and wash your hands after handling.

Shipping and Storage

Chemcassettes® are shipped in their protective packaging (sealed in a lightproof plastic bag and inserted into a cardboard box) and should remain so until ready for use. This protects them from any unnecessary exposure to light, air or moisture. Most MDA Chemcassettes® will maintain optimum sensitivity even when stored at room temperature (less than 25°C, 77°F).

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Chemcassettes[®] for ammonia, aliphatic amines/ammonia, chlorine III/oxidizers, diisocyanates, hydrogen cyanide, hydrogen peroxide, minerals acids, ozone, and sulfur dioxide must be stored in a freezer (less than 0°C, 32°F). Since the temperature of storage rooms can vary, it is recommended that all Chemcassettes[®] and XP/XP4 Chemcassettes[®] be stored in a freezer, except chlorine/chlorine dioxide, chlorine/oxidizers, phosgene and XP/XP4 phosgene must be stored at 4-25°C (40-77°F). After removing a Chemcassette[®] from the freezer, allow it to adjust to ambient conditions before use. If a freezer is not available to store all types of Chemcassettes[®], follow the temperature storage information on the label of each Chemcassette[®]. Chemcassettes[®] that require cold storage must be placed in a freezer upon arrival. Shipping time (when the Chemcassette[®] is not refrigerated) is factored into the expiration date.

Expiration and Inspection

Chemcassettes[®] are carefully inspected and tested for performance before shipment. The expiration date represents the date after which the Chemcassette[®] should no longer be used. You will usually have 3 months for standard and 1 year for XP/XP4 to use the Chemcassette[®] once it is received. Once outdated, the Chemcassette[®] should be discarded.

Upon opening the packaging, the tape may also be examined for discoloration. Some discoloration of the tape around the edges is not unusual and does not affect performance of the monitoring system. If the surface of the tape has discolored, the tape should be discarded or returned to Honeywell Analytics for replacement. Regardless of expiration date, if you are not monitoring continuously, an SP (Standard Play) size Chemcassette[®] should be replaced 2 weeks after the package is opened and most 30-day Chemcassettes[®], EP (Extended Play), LP (Long Play), EGM, Vertex, CM4 or SPM Flex Chemcassette[®] should be discarded after 5 weeks from the date opened.

Note: Hydrogen cyanide Chemcassettes[®] for CM4, EGM, SPM Flex and Vertex should be replaced 2 weeks after the package is opened. The CM4 chlorine and nitrogen dioxide Chemcassettes[®], as well as, the EGM ozone and sulfur dioxide Chemcassettes[®] should be replaced 2 weeks after the package is opened.

XP Chemcassette[®] (XPV, XPC, XPL, XPS, XPE, Flex CC XP and XPT) should be discarded after 3 months from the date opened. XP4 Chemcassette (XP4-C and XP4-V) should be discarded after 4 months from the date opened. It is best to leave the Chemcassette[®] in its protective packaging until it is used.

Operating Time

Under normal running conditions, with no target gas present, the SP and XPT Chemcassette[®] will run continuously (24 hr/day) for 1 week in most instruments. The SP and SPM Flex (p/n 1265-4xxx) Chemcassettes[®] will run continuously for 2 weeks in the TLD and SPM models. The EP, LP, EGM, Flex CC (fluorine/Ox, diisocyanates, hydrazines, sulfur dioxide, ozone and hydrogen peroxide) Vertex and CM4 Chemcassettes[®] will last for 30 days on continuous monitoring.

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Note: The following Chemcassettes[®] are for 2 weeks of continuous monitoring only: Vertex hydrogen cyanide; CM4 hydrogen cyanide and nitrogen dioxide; EGM hydrogen cyanide, ozone and sulfur dioxide; and ChemKey/TLD XPT for hydrides, and SPM Flex (p/n 1265-4xxx) Chemcassettes[®].

The XP Chemcassette[®] (XPC, XPL, XPS, XPE, XPV and Flex CC XP) will last for 3 months on CM4, System 16, SPM, SPM Flex, EGM, and Vertex. The XP4 Chemcassette (XP4-C and XP4-V) will last for 4 months on CM4 and Vertex. If you have any questions on the storage, handling or performance of your Chemcassettes[®], please contact your Honeywell Analytics Representative.

Find out more

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