

Technical Note

Sensi-Tape Handling, Storage and Use

Sensi-Tape is a colorimetric-based sensor paper used by CI Analytics 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. Sensi-Tapes 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 Sensi-Tape production process is carefully controlled to assure that the Sensi-Tapes will perform as intended in CI Analytics monitoring systems. Each and every Sensi-Tape batch is dynamically tested according to NIOSH methodologies with a gas it is designed to detect and the results are carefully documented. 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 Sensi-Tape®.

The following simple guidelines for handling, shipping, and storage of CI Analytics Sensi-Tapes are recommended to ensure optimum performance of your CI Analytics Sensi-Tape based monitor. By following these guidelines you can be assured of the fast, sensitive response and low maintenance for which the Sensi-Tape system is well known.

Handling

CI Analytics Sensi-Tapes are non-toxic and require no special precautions to protect workers. There is no need for special transportation or disposal procedures, except in the case of recommended refrigeration requirements. **The Sensi-Tapes are 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, Safety Data Sheets (SDS) 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

Sensi-Tapes are shipped in their protective packaging (sealed in a lightproof plastic bag and may be 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 CI Analytics Sensi-Tapes will maintain optimum sensitivity even when stored at room temperature (< 25 °C, 77 °F).

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Sensi-Tape® Storage Temperatures

Sensi-Tape storage temperatures depend on chemical type and can be stored in freezers, refrigerators and at room temperature. In most cases, it is acceptable to go to colder storage spaces.

The following chemical tapes must be stored in **freezer** (< 0 °C, < 32 °F):

- Ammonia
- Aliphatic Amines/Ammonia
- Chlorine III/Oxidizers
- Hydrogen Cyanide
- Mineral Acid
- NO_x
- Sulfur Dioxide

The following chemical tapes are recommended to be stored in **refrigerator** (see range):

- Chlorine/oxidizers (4 °C < 25 °C, 40 °F < 77 °F)
- Phosgene (All) (< 25 °C, < 77 °F)
- Hydrides (4 °C < 10 °C, 40 °F < 50 °F) Acceptable to use colder storage

The remainder of chemicals can be stored at **room temperature** (< 25 °C, < 77 °F):

- Chlorine/chlorine dioxide
- Fluorine / Oxidizers
- Hydrides (SP, EP and LP only)
- Hydrogen Sulfide
- Nitrogen Dioxide
- Aromatic Amine

After removing a Sensi-Tape from the freezer, allow it to adjust to ambient conditions before using it. Phosgene may experience slight color change between storage temperature changes but this is normal.

If a freezer or refrigerator is not available to store Sensi-Tapes, follow the temperature storage information on the label of each Sensi-Tape. Sensi-Tapes that require freezer storage must be placed in a freezer upon arrival. Shipping time (when the Sensi-Tapes are not refrigerated) is factored into the expiration date.