



DTXtape[®]

CARBON DIOXIDE DETECTION TAPE

APPLICATION AND INFORMATION MANUAL

Carbon Dioxide Detection Tape

Application Techniques



Preparation

Ensure that the substrate surface is clean, dry, and free of any debris, oils, loose particles, etc.



Application

Carbon dioxide detection tape is a Pressure Sensitive Adhesive (PSA) tape and requires pressure applied by hand or roller.



Method

Not every situation will allow for DTX Tape to be easily wrapped around the substrate. In challenging areas, cut a strip of tape slightly longer than the circumference of the pipe. Wrap it around the pipe and press the two adhesive sides firmly together to seal. The tape uses a low-tack adhesive to prevent residue on pipes, but it bonds securely to itself. **Refer to the image on the right.** This not only will help encapsulate the surface, but it also helps with establishing contact with carbon dioxide gas, thereby allowing you to identify a potential leak.



Colour Change

Ensure tape is applied as smoothly as possible to avoid wrinkling, as large wrinkles can cause an irregular colour change. However, any evidence of a colour change on the tape should always be investigated as indication of a possible leak.

Application Technique



Specifications and Important Information

- This product is intended for use as a localised carbon dioxide indicator. It is not able to prevent gas leaks
- A 12-month guarantee applies once the tape is applied to joints and fittings. Extended performance may be possible, subject to environmental conditions including UV exposure and other site-specific factors.
- Colour-change speed depends on: carbon dioxide concentration, flow rate, and temperature. Higher concentration and flow rate cause a faster colour-change.
- Detects leaks as small as 0.5 oz/yr (approximately equivalent to one bubble per minute using a typical soap-and-water leak test).
- When the tape changes from purple to yellow, and carbon dioxide flow is stopped, the colour should revert within 1 hour.
- It is recommended to replace the tape once removed from a pipe, as foreign particles can impact adhesion and performance.
- Apply tape smoothly to avoid wrinkles that may cause irregular colour change.
- Suitable for continuous use at temperatures up to 50°C, with short-term exposure to higher temperatures acceptable for leak spot checks.

Carbon Dioxide Detection Tape

I Specifications and Important Information – Continued

- Apply the adhesive side directly to the fitting. The adhesive side is gas permeable and provides the fastest response to CO₂; exposure to the non-adhesive side will result in a much slower colour change.
- Any visible colour change should be investigated as a possible leak.
- Use of the tape might lower or redirect leak flow; remove tape before reconfirmation.
- UV rays may fade the purple colour — this tape is recommended for indoor use only.
- Dust, rust, or other particles may slow the colour change.
- If the tape becomes wet, it should still respond to Carbon Dioxide.
- Do not apply to freshly painted pipes — may cause permanent yellowing or detection failure.
- For best adhesion, it is recommended to clean the pipe surface with isopropyl alcohol before applying the tape to remove any surface residue.

I General Storage Conditions

- Recommended storage: Store under normal ambient conditions, protected from direct sunlight.
- Exposure to direct sunlight should be avoided, as UV exposure will cause the tape to fade.
- A 12-month guarantee applies once the tape is applied to joints and fittings. Extended performance may be possible, subject to environmental conditions including UV

I Warnings

- This product is a localised carbon dioxide gas indicator and must be used as part of a comprehensive gas detection system.
- DTX Tape will not prevent leaks.
- Do not use DTX Tape to detect other gases — only carbon dioxide.
- Not all gases/gas mixtures have been tested.
- Exposure to NO_x or SO_x gases may cause permanent yellowing.
- Application on fresh paint may result in permanent colour change or detection failure.

Carbon Dioxide Detection Tape

Summary

Sensitivity	<i>Detects leaks as small as 0.5 oz/yr</i>
Response Time	<i>Within 5 minutes (depending on specific conditions)</i>
Reset Time	<i>Up to 1 hour after leak is resolved</i>
Recommended Storage Conditions	<i>ambient conditions, out of direct sunlight (N.B. Product is sensitive to UV light)</i>
Material	<i>Polyethylene and Polyester</i>
Tape Length	<i>5m</i>
Product Weight	<i>35g</i>



Carbon Dioxide Detection Tape

I Disclaimers

- DTX Tape is a supplementary visual carbon dioxide indicator only. It is not a CO₂ alarm, personal safety monitor or life-safety device. It must be used as part of an appropriate gas-detection and safety system and must not replace any fixed or portable CO₂ alarms, gas detection equipment, ventilation systems or any other safety measures required for the installation or workplace.
- DTX Tape must not be relied upon as the sole method of detecting a CO₂ leak or confirming that a system is leak-free. The absence of a visible colour change does not confirm that a system is leak-free or that carbon dioxide is not present.
- DTX Tape is intended only to indicate the possible presence of carbon dioxide at the location where it is correctly applied. It must not be used to detect any other gas or gas mixture. It does not measure carbon dioxide concentration or determine whether an atmosphere is safe.
- Product response and performance may vary according to operating and environmental conditions, including CO₂ concentration, leak flow rate, temperature, application method, surface condition, contamination, UV exposure and exposure to other gases or environmental factors.
- Performance figures, including references to detection of leaks as small as 0.5 oz/yr and response within 5 minutes, are based on defined test conditions and should not be interpreted as guaranteeing that the same performance will be achieved under all installation or operating conditions.
- The 12-month guarantee applies only to DTX Tape stored, applied and used in accordance with these instructions and the recommended operating conditions. It does not guarantee that every CO₂ leak will be detected, that response performance will remain unchanged in all environments, or that the system to which the tape is applied will remain leak-free.
- Do not ingest DTX Tape. In the event of accidental ingestion, seek appropriate medical advice.
- DTX Tape does not prevent, contain or repair CO₂ leaks. Any visible colour change, or other reason to suspect a leak, must be investigated using appropriate gas-detection, maintenance and safety procedures.
- Failure to store, apply or use DTX Tape in accordance with these instructions may prevent the product from operating as intended. Insignia Technologies Ltd is not responsible for loss or damage arising from misuse, incorrect application, use for an unintended purpose, failure to follow these instructions or reliance on DTX Tape as a substitute for appropriate gas-detection or safety equipment, except to the extent that liability cannot lawfully be excluded or restricted.



DTXtape®

CARBON DIOXIDE DETECTION TAPE