

## PRODUCT INFORMATION

### Product Description:

DetectTape<sup>®</sup> H2 is a passive colorimetric (color changing) self-fusing silicone tape designed to detect hydrogen gas (H<sub>2</sub>) leaks in fuel cell, transmission, storage, and generation facilities.

When in contact with concentrated hydrogen gas, the tape color changes from light gray to dark black in the event of a leak due to damage or seal failure.

### Features:

- No Adhesive - Bonds to itself on contact
- Can be used on all metal substrates
- Little to no surface preparation required
- Chemical and UV resistant
- Operating Temperature range \*  
-65°F up to +450°F (-54°C to +232°C)
- Easy to install
- Changes color within minutes of detection
- Works with commonly used detection tools
- Requires no power

## APPLICATION EXAMPLES

DetectTape<sup>®</sup> H2 can be used on hydrogen pipelines and other objects where tape can be wrapped around itself.

Application examples include but are not limited to connections, fittings, valves, welded seams, joints, flanges, and areas susceptible to vibration damage.

## APPEARANCE

Appearance   Packaged (No Hydrogen Detected)	Gray tape roll with a blue guideline.
Appearance   Applied (No Hydrogen Detected)	Gray tape with a blue guideline.
Appearance   Applied (Hydrogen Detected)	Black tape with a blue guideline.
Reaction Time (Based on hydrogen leak rate of 110cc/min at 15 psi / 1 bar)	Noticeable color change can be seen within 2-3 minutes of exposure. Significant color change within 30 minutes.

## PART INFORMATION

Part #	Roll Information
DT-H210015-PF4	Detect up to 40 1/4 in diameter connections. Perforated every 4 in. Roll Size: 0.010 in x 1.00 in x 15 ft
DT-H210015-PF8	Detect up to 20 1/2 in diameter connections. Perforated every 8 in. Roll Size: 0.010 in x 1.00 in x 15 ft
DT-H22020018	Detect leaks on large diameter connections. Not perforated. Roll Size: 0.020 in x 2.00 in x 18 ft

## SPECIFICATIONS

Property	Test Method	Value
Continuous Temperature Range		-65°F to +450°F -54°C to +232°C
Intermittent Temperature Range (24 hrs)*		-85°F to 500°F -65°C to 260°C
Cold Brittle Point Max	ASTM D-2137	-85°F -65°C
Water Absorption	Fed STD 601 Method 6251	3% Max by weight
Tensile Strength	ASTM D-412	700 PSI Minimum
Elongation	ASTM D-412	300% Minimum
Tear Resistance		85 PSI
Durometer Hardness		50 Shore A
Thickness Tolerance		+/- .002 in +/- 0.05 mm
Width Tolerance		+/- 0.125 in +/- 3.175 mm

\* Reaction time may be affected based on tape or ambient temperature. Warmer temperatures are known to improve reaction speed. Colder temperatures may slow reaction speed.

## SURFACE PREPARATION RECOMMENDATIONS

Inspect intended detection point and surrounding area for contaminants. Wipe area clean of debris or fluids.

DISCLAIMER: Midsun Specialty Products, Inc. (MSP) warrants that the product(s) represented within conform(s) to its/their chemical and physical description and is appropriate for the use as stated on the respective technical data sheet when used in compliance with MSP written instructions. Since many installation factors are beyond the control of MSP the user is obligated to determine the suitability of the products for the intended use and assume all risks and liabilities in connection herewith. MSP liability is stated in the standard terms and conditions of sale. MSP makes no other warranty either expressed or implied. All information contained in the respective technical data sheet(s) should be used as a guide and is subject to change without notice. This document supersedes all previous revisions.

## APPLICATION INSTRUCTIONS

STEP 1	Pull tape strip from roll up to perforation point**.
STEP 2	Tear away tape strip from roll at perforation point** and remove liner backing. Ensure blue guideline is facing outward for clear visibility.
STEP 3	Press tape strip firmly approximately 1 inch (2.5 cm) away from the intended detection point and begin the first wrap with one 100% complete overlap. TIP: Tightly stretching the tape around irregular contours can provide a cleaner presentation.
STEP 4	Continue stretching the tape strip while wrapping with a half overlap, using the blue guideline as half point, across desired area until approximately 1 inch (2.5 cm) past the intended detection point.
STEP 5	Finish the wrap by ending the remaining tape strip with a 100% complete final overlap. Press on wrap firmly.

\*\* DT-H22020018 is not designed with a perforation point. This part is intended to accommodate large diameter hydrogen systems. Cut with scissors as needed.

## STORAGE / HANDLING / SHELF LIFE

Storage	Store in a cool and dry area, away from direct sunlight.
Handling	Keep tape roll clean and free of dust, dirt or debris using the provided container.
Shelf Life	One year from DOM

## DETECTION INSTRUCTIONS

During routine or spot inspections, visually examine tape to determine if a hydrogen leak has been detected. Use images below as a guide to visual indication of a leak.



### NO LEAK DETECTED

Detection point has not been exposed to any significant concentrations of hydrogen gas. No leak is present.



### HYDROGEN LEAK DETECTED

Detection point is experiencing a hydrogen leak. Contact your local maintenance team immediately for repair or replacement.

**\*NOTE\*** Depending on the severity, duration, or location of the leak, the localized connection may be partially or gradually darkened. In the case of a partial darkening, contact your maintenance team for confirmation of a leak.

## TAPE REMOVAL

Use a utility knife, blade or a scissor to easily remove tape from connection. Cut away tape and dispose of in a proper trash receptacle.

## Passive Leak Detection Using Commercial Hydrogen Colorimetric Indicator

Visit <http://www.detectape.com/nrelreport> to read our latest DetecTape<sup>®</sup> H2 Technical Report published by NREL

DISCLAIMER: Midsun Specialty Products, Inc. (MSP) warrants that the product(s) represented within conform(s) to its/their chemical and physical description and is appropriate for the use as stated on the respective technical data sheet when used in compliance with MSP written instructions. Since many installation factors are beyond the control of MSP the user is obligated to determine the suitability of the products for the intended use and assume all risks and liabilities in connection herewith. MSP liability is stated in the standard terms and conditions of sale. MSP makes no other warranty either expressed or implied. All information contained in the respective technical data sheet(s) should be used as a guide and is subject to change without notice. This document supersedes all previous revisions.