Safety Data Sheet

Section 1: Identification

Product identifier

Product Name • **MemBrain Continuous Air Barrier & Smart Vapor Retarder**

Product Code
- CT10072-4
- Product Literature Code: 30-28-079.

Relevant identified uses of the substance or mixture and uses advised against

Recommended use
- Vapor Retarder and Continuous Interior Air Barrier

Details of the supplier of the safety data sheet

Manufacturer
- CertainTeed Corporation

  750 E. Swedesford Road
  P.O. Box 860 Valley Forge, PA 19482-0105
  United States
  www.certainteed.com
  Building.Solutions@saint-gobain.com

Telephone (Technical)
- (610) 341-7000 - 9 AM – 5 PM (Eastern Time – USA)

Emergency telephone number

Manufacturer
- 800-527-3887

Section 2: Hazard Identification

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

Classification of the substance or mixture

OSHA HCS 2012
- Classification criteria not met

Label elements

OSHA HCS 2012

Hazard statements
- No label element(s) required

Other hazards

OSHA HCS 2012
- This product is not considered hazardous under the U.S. OSHA 29 CFR 1910.1200 Hazard Communication Standard.

Canada

According to: WHMIS

Classification of the substance or mixture

WHMIS
- Classification criteria not met

Label elements

WHMIS
- No label element(s) required

Other hazards

WHMIS
- In Canada, the product mentioned above is not considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

Other information

- This product may cause temporary irritation to the upper respiratory system, eyes, and skin. Avoid inhalation, skin and eye contact as temporary irritation may occur. Wear appropriate personal protective equipment as described in Section 8.

See Section 12 for Ecological Information.

Section 3 - Composition/Information on Ingredients

Substances

- Material does not meet the criteria of a substance.

Mixtures

Composition					
Chemical Name	**Identifiers**	**%**	**LD50/LC50**	**Classifications According to Regulation/Directive**	**Comments**
Poly (iminocarbonylpentamethylene)	**CAS:**25038-54-4	99% TO 100%	NDA	**OSHA HCS 2012:** Data Lacking	NDA
2H-Azepin-2-one, hexahydro-	**CAS:**105-60-2 **EC Number:**203-313-2	0% TO 1%	Ingestion/Oral-Rat LD50 • 1210 mg/kg Inhalation-Rat LC50 • 300 mg/m³ 2 Hour(s) Skin-Rabbit LD50 • 1410 µL/kg	**OSHA HCS 2012:** Acute Tox 4 (Orl, Inhl); Eye Irrit. 2;	NDA
Additives	NDA	0% TO 1%	NDA	**OSHA HCS 2012:** Data lacking	NDA
Colorants	NDA	0% TO 1%	NDA	**OSHA HCS 2012:** Data lacking	NDA

See Section 11 for Toxicological Information.

Section 4: First-Aid Measures

Description of first aid measures

Inhalation
- Remove to fresh air, apply artificial respiration and/or oxygen if necessary and get medical attention.

Skin
- Wash skin with soap and water. Consult a physician if irritation persists.

Eye
- Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion
- Consult a physician if unusual reaction is noted. Product is not intended nor is it likely to be ingested or eaten.

Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

Indication of any immediate medical attention and special treatment needed

Notes to Physician

- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Key to abbreviations

= See Section 2 for Potential Health Effects

Section 5: Fire-Fighting Measures

Extinguishing media

Suitable Extinguishing Media

- Use any media suitable for the surrounding fires.

Unsuitable Extinguishing Media

- None known.

Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards

- Molten film at higher temperatures can ignite and will burn.

Hazardous Combustion Products

- Thermal decomposition products may include but are not limited to caprolactam hydrogen cyanide, carbon monoxide, carbon dioxide and combustion by-products.

Advice for firefighters

- Fire fighters should wear full-face, self contained breathing apparatus and impervious protective clothing.

Section 6 - Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal Precautions

- Avoid contact with skin and eyes during clean-up.

Emergency Procedures

- Persons not wearing appropriate protective equipment should be excluded from area of spill until clean-up has been completed. Ventilate the contaminated area.

Environmental precautions

- No special precautions necessary.

Methods and material for containment and cleaning up

Containment/Clean-up Measures

- Containment of this material should not be necessary.
  Remove sources of ignition.
  Collect material and place in a solid waste container.

Section 7 - Handling and Storage

Precautions for safe handling

Handling

- Use good personal hygiene and good housekeeping.

Conditions for safe storage, including any incompatibilities

Storage

- Store in a cool, dry place. Store at room temperature out of direct sunlight.

Incompatible Materials or Ignition Sources

- Strong oxidizers.

Section 8 - Exposure Controls/Personal Protection

Control parameters

Exposure Limits/Guidelines						
	Result	ACGIH	Canada British Columbia	Canada Manitoba	Canada New Brunswick	Canada Northwest Territories
2H-Azepin-2-one, hexahydro- (105-60-2)	STELs	Not established	3 mg/m3 STEL (dust)	Not established	10 ppm STEL (vapor); 46 mg/m3 STEL (vapor); 3 mg/m3 STEL (dust)	3 mg/m3 STEL (dust); 10 ppm STEL (vapor); 46 mg/m3 STEL (vapor)
	TWAs	5 mg/m3 TWA (inhalable fraction and vapor)	1 mg/m3 TWA (dust)	5 mg/m3 TWA (inhalable fraction and vapor)	1 mg/m3 TWA (dust); 5 ppm TWA (vapor); 23 mg/m3 TWA (vapor)	1 mg/m3 TWA (dust); 5 ppm TWA (vapor); 23 mg/m3 TWA (vapor)

Exposure Limits/Guidelines (Con't.)						
	Result	Canada Nova Scotia	Canada Nunavut	Canada Ontario	Canada Quebec	Canada Yukon
2H-Azepin-2-one, hexahydro- (105-60-2)	TWAs	5 mg/m3 TWA (inhalable fraction and vapor)	1 mg/m3 TWA (dust); 5 ppm TWA (vapor); 23 mg/m3 TWA (vapor)	5 mg/m3 TWA (inhalable fraction and vapor)	5 ppm TWAEV (vapour); 23 mg/m3 TWAEV (vapour); 1 mg/m3 TWAEV (dust)	1 mg/m3 TWA (dust); 5 ppm TWA (vapour); 20 mg/m3 TWA (vapour)
	STELs	Not established	3 mg/m3 STEL (dust); 10 ppm STEL (vapor); 46 mg/m3 STEL (vapor)	Not established	10 ppm STEV (vapour); 46 mg/m3 STEV (vapour); 3 mg/m3 STEV (dust)	3 mg/m3 STEL (dust); 10 ppm STEL (vapour); 40 mg/m3 STEL (vapour)

Exposure Limits/Guidelines (Con't.)		
	Result	NIOSH
2H-Azepin-2-one, hexahydro- (105-60-2)	STELs	3 mg/m3 STEL (dust); 0.66 ppm STEL (vapor); 3 mg/m3 STEL (vapor)
	TWAs	1 mg/m3 TWA (dust); 0.22 ppm TWA (vapor); 1 mg/m3 TWA (vapor)

Exposure Control Notations

Canada Manitoba

•2H-Azepin-2-one, hexahydro- (105-60-2): **Carcinogens:** (A5 Not Suspected as a Human Carcinogen)

Canada New Brunswick

•2H-Azepin-2-one, hexahydro- (105-60-2): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen)

Canada Nova Scotia

•2H-Azepin-2-one, hexahydro- (105-60-2): **Carcinogens:** (A5 - Not Suspected as a Human Carcinogen)

ACGIH

•2H-Azepin-2-one, hexahydro- (105-60-2): **Carcinogens:** (A5 - Not Suspected as a Human Carcinogen)

Exposure Limits Supplemental

ACGIH

•2H-Azepin-2-one, hexahydro- (105-60-2): **TLV Basis - Critical Effects:** (upper respiratory tract irritation)

Exposure controls

Engineering Measures/Controls

- Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Equipment

Pictograms	• 
Respiratory	• Under normal conditions of use no special protection is required. Wear NIOSH-approved respirators in areas where the PEL/TLV is exceeded.
Eye/Face	• Safety glasses that conform to ANSI Z87.1 should be worn.
Skin/Body	• Not normally required. Use heat-resistant gloves if handling melted material.
General Industrial Hygiene Considerations	• Handle in accordance with good industrial hygiene and safety practice.
Environmental Exposure Controls	• No data available

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene
NIOSH = National Institute of Occupational Safety and Health
OSHA = Occupational Safety and Health Administration
STEL = Short Term Exposure Limits are based on 15-minute exposures
TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures
TWAEV = Time-Weighted Average Exposure Value

Section 9 - Physical and Chemical Properties

Information on Physical and Chemical Properties

Material Description			
Physical Form	Solid	Appearance/Description	Clear or colored plastic film.
Color	Clear/colored	Odor	None
Taste	No data available.	Particulate Type	Not relevant
Particulate Size	Not relevant	Aerosol Type	Not relevant
Odor Threshold	Not relevant	Physical and Chemical Properties	Solid
General Properties			
Boiling Point	Not relevant	Melting Point	428 to 433 F(220 to 222.7778 C)
Decomposition Temperature	Not relevant	Heat of Decomposition	Not relevant
pH	Not relevant	Specific Gravity/Relative Density	1.12 to 1.14 Water=1
Density	9.3464 to 9.5133 lbs/gal	Bulk Density	Not relevant
Water Solubility	Negligible	Solvent Solubility	Not relevant
Viscosity	Not relevant	Explosive Properties	Not relevant
Oxidizing Properties:	Not relevant		
Volatility			
Vapor Pressure	Not relevant	Vapor Density	Not relevant
Evaporation Rate	Not relevant	VOC (Wt.)	Not relevant
VOC (Vol.)	Not relevant	Volatiles (Wt.)	Not relevant
Volatiles (Vol.)	Not relevant		
Flammability			
Flash Point	Not relevant	UEL	Not relevant
LEL	Not relevant	Autoignition	Not relevant
Self-Accelerating Decomposition Temperature (SADT)	Not relevant	Heat of Combustion (ΔHc)	Not relevant
Burning Time	Not relevant	Flame Height	Not relevant
Flame Extension	Not relevant	Ignition Distance	Not relevant
Flame Duration	Not relevant	Flammability (solid, gas)	Not relevant
Environmental			
Half-Life	Not relevant	Octanol/Water Partition coefficient	Not relevant

Coefficient of water/oil distribution	Not relevant	Bioaccumulation Factor	Not relevant
Bioconcentration Factor	Not relevant	Biochemical Oxygen Demand BOD/BOD5	Not relevant
Chemical Oxygen Demand	Not relevant	Persistence	Not relevant
Degradation	Not relevant		

Section 10: Stability and Reactivity

Reactivity

- No dangerous reaction known under conditions of normal use.

Chemical stability

- Stable under normal conditions.

Possibility of hazardous reactions

- Hazardous polymerization will not occur.

Conditions to avoid

- Avoid exposure to open flame or temperatures exceeding recommended processing temperatures. The maximum temperature to which the film can be exposed will vary with exposure time.

Incompatible materials

- Strong oxidizers.

Hazardous decomposition products

- Thermal decomposition products may include but are not limited to caprolactam hydrogen cyanide, carbon monoxide, carbon dioxide and combustion by-products.

Section 11 - Toxicological Information

Information on toxicological effects

Components		
2H-Azepin-2-one, hexahydro- (0% TO 1%)	105-60-2	**Acute Toxicity:** Ingestion/Oral-Rat LD50 • 1210 mg/kg; *Sense Organs and Special Senses:Eye*:**Chromodacyroffhea**; *Behavioral*:**Convulsions or effect on seizure threshold**; *Nutritional and Gross Metabolic:Changes in Chemistry or Temperature*:**Body temperature decrease**; Inhalation-Rat LC50 • 300 mg/m³ 2 Hour(s); Skin-Rabbit LD50 • 1410 µL/kg; **Irritation:** Eye-Rabbit • 20 mg 24 Hour(s) • Moderate irritation; Skin-Rabbit • 500 mg 24 Hour(s) • Mild irritation

GHS Properties	Classification
Acute toxicity	**OSHA HCS 2012** • Classification criteria not met
Aspiration Hazard	**OSHA HCS 2012** • Classification criteria not met
Carcinogenicity	**OSHA HCS 2012** • Classification criteria not met
Germ Cell Mutagenicity	**OSHA HCS 2012** • Classification criteria not met
Skin corrosion/Irritation	**OSHA HCS 2012** • Classification criteria not met
Skin sensitization	**OSHA HCS 2012** • Classification criteria not met
STOT-RE	**OSHA HCS 2012** • Classification criteria not met
STOT-SE	**OSHA HCS 2012** • Classification criteria not met
Toxicity for Reproduction	**OSHA HCS 2012** • Classification criteria not met

Respiratory sensitization	**OSHA HCS 2012** • Classification criteria not met
Serious eye damage/Irritation	**OSHA HCS 2012** • Classification criteria not met

Route(s) of entry/exposure
- Inhalation, Skin, Eye, Ingestion

Potential Health Effects

Inhalation

Acute (Immediate)
- Under normal conditions of use, no health effects are expected. Elevated processing temperature may cause temporary irritation of nose and throat.

Chronic (Delayed)
- Data lacking.

Skin

Acute (Immediate)
- Temporary irritation of the skin may occur in some individuals.

Chronic (Delayed)
- Data lacking.

Eye

Acute (Immediate)
- Temporary irritation or redness may occur.

Chronic (Delayed)
- Data lacking.

Ingestion

Acute (Immediate)
- Unlikely. Contact physician if unusual reaction is noted.

Chronic (Delayed)
- Data lacking.

Section 12 - Ecological Information

Toxicity

- Material data lacking.

Persistence and degradability

- Material data lacking.

Bioaccumulative potential

- Material data lacking.

Mobility in Soil

- Material data lacking.

Other adverse effects

Potential Environmental Effects
- Material is considered inert and is not expected to be biodegradable or toxic.

Section 13 - Disposal Considerations

Waste treatment methods

Product waste
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	UN number	UN proper shipping name	Transport hazard class (es)	Packing group	Environmental hazards

DOT	NDA	Not Regulated	NDA	NDA	NDA
TDG	NDA	Not Regulated	NDA	NDA	NDA
IATA/ICAO	NDA	Not Regulated	NDA	NDA	NDA

Special precautions for user
- None known.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
- Not relevant.

Section 15 - Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications
- None

State Right To Know				
Component	**CAS**	**MA**	**NJ**	**PA**
2H-Azepin-2-one, hexahydro-	105-60-2	Yes	Yes	Yes
Poly (iminocarbonylpentamethylene)	25038-54-4	No	No	No

Inventory				
Component	**CAS**	**Canada DSL**	**Canada NDSL**	**TSCA**
2H-Azepin-2-one, hexahydro-	105-60-2	Yes	No	Yes
Poly (iminocarbonylpentamethylene)	25038-54-4	Yes	No	Yes

Canada

Labor

Canada - WHMIS - Classifications of Substances

• 2H-Azepin-2-one, hexahydro-	105-60-2	D1A, D2B
• Poly(iminocarbonylpentamethylene)	25038-54-4	Not Listed

Canada - WHMIS - Ingredient Disclosure List

• 2H-Azepin-2-one, hexahydro-	105-60-2	1 %
• Poly(iminocarbonylpentamethylene)	25038-54-4	Not Listed

Environment

Canada - CEPA - Priority Substances List

• 2H-Azepin-2-one, hexahydro-	105-60-2	Not Listed
• Poly(iminocarbonylpentamethylene)	25038-54-4	Not Listed

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

• 2H-Azepin-2-one, hexahydro-	105-60-2	Not Listed
• Poly(iminocarbonylpentamethylene)	25038-54-4	Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

• 2H-Azepin-2-one, hexahydro-	105-60-2	Not Listed

• Poly(iminocarbonylpentamethylene)	25038-54-4	Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

• 2H-Azepin-2-one, hexahydro-	105-60-2	Not Listed
• Poly(iminocarbonylpentamethylene)	25038-54-4	Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• 2H-Azepin-2-one, hexahydro-	105-60-2	Not Listed
• Poly(iminocarbonylpentamethylene)	25038-54-4	Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

• 2H-Azepin-2-one, hexahydro-	105-60-2	Not Listed
• Poly(iminocarbonylpentamethylene)	25038-54-4	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

• 2H-Azepin-2-one, hexahydro-	105-60-2	Not Listed
• Poly(iminocarbonylpentamethylene)	25038-54-4	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

• 2H-Azepin-2-one, hexahydro-	105-60-2	Not Listed
• Poly(iminocarbonylpentamethylene)	25038-54-4	Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• 2H-Azepin-2-one, hexahydro-	105-60-2	Not Listed
• Poly(iminocarbonylpentamethylene)	25038-54-4	Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

• 2H-Azepin-2-one, hexahydro-	105-60-2	Not Listed
• Poly(iminocarbonylpentamethylene)	25038-54-4	Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List

• 2H-Azepin-2-one, hexahydro-	105-60-2	Not Listed
• Poly(iminocarbonylpentamethylene)	25038-54-4	Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

• 2H-Azepin-2-one, hexahydro-	105-60-2	Not Listed
• Poly(iminocarbonylpentamethylene)	25038-54-4	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• 2H-Azepin-2-one, hexahydro-	105-60-2	Not Listed
• Poly(iminocarbonylpentamethylene)	25038-54-4	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• 2H-Azepin-2-one, hexahydro-	105-60-2	Not Listed
• Poly(iminocarbonylpentamethylene)	25038-54-4	Not Listed

United States - Pennsylvania

Labor

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

• 2H-Azepin-2-one, hexahydro-	105-60-2	Not Listed

• Poly(iminocarbonylpentamethylene)	25038-54-4	Not Listed

U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

• 2H-Azepin-2-one, hexahydro-	105-60-2	Not Listed
• Poly(iminocarbonylpentamethylene)	25038-54-4	Not Listed

United States - Rhode Island

Labor

U.S. - Rhode Island - Hazardous Substance List

• 2H-Azepin-2-one, hexahydro-	105-60-2	Toxic
• Poly(iminocarbonylpentamethylene)	25038-54-4	Not Listed

Section 16 - Other Information

Last Revision Date
- 28/May/2015

Preparation Date
- 11/September/2012

Other Information
- For reference to the acronyms/definitions used in this MSDS please visit www.certainteed.com.

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Key to abbreviations

NDA = No Data Available