

SAFETY DATA SHEET

SENTINEL® H2O BONDING ADHESIVE



SECTION 1 IDENTIFICATION

Product Name	SENTINEL® H2O Bonding Adhesive
Recommended Use	Waterborne polymeric membrane and flashing adhesive for adhering SENTINEL® PVC membranes
Manufacturer	Perfromance Roof Systems
Address	4821 Chelsea Avenue Kansas City, MO 64130
Phone Number	(800) 727-9872
Emergency Number	(800) 424-9300 (CHEMTREC)

SECTION 2 HAZARDS

GHS Classification	Flammable Liquid: Category 4 Skin Irritation: Category 2 STOT: Single Exposure: Category 3 STOT: Repeat Exposure: Category 2
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Hazard Pictographs



Signal Word

WARNING

Hazard Statements

H227 - Combustible liquid
H315 - Causes skin irritation
H336 - May cause drowsiness or dizziness
H361d - Suspected of damaging the unborn child
H373 - May cause damage to organs (central nervous system) through prolonged or repeated exposure (Inhalation)

Precautionary Statements

P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P210 - Keep away from open flames. - NO SMOKING
P233 - Keep container tightly closed
P240 - Ground container and receiving equipment
P241 - Use explosion-proof electrical equipment
P242 - Use only non-sparking tools
P243 - Take precautionary measures against static discharge
P260 - Do not breathe fume, gas, vapors
P263 - Avoid contact during pregnancy/while nursing.
P264 - Wash hands, forearms and face thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective gloves and clothing

Response

P301+P330+P331 - If swallowed: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 - If on skin (or hair), Take off immediately all contaminated clothing. Rinse skin with water/shower
P303+P340 - If inhaled, remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - If in eyes: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P314 - Get medical advice/attention if you feel unwell
P370+P378 - In case of fire: Use carbon dioxide (CO₂), foam, dry extinguishing powder to extinguish

ABBREVIATION KEY

GHS = Global Harmonized System
OSHA = Occupational Safety & Health

HCS = Hazard Communication Standard

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SECTION 2 HAZARDS

Storage	P403+P235 - Store in well-ventilated place. Keep cool P405 - Store locked up
Disposal	P501 - Dispose of contents and/or container in accordance with local, regional and national regulations

SECTION 3 COMPOSITION

Chemical Composition

COMPONENT	CAS NUMBER	PERCENT BY WEIGHT
Toluene	108-88-3	3 - 10
Methanol	67-56-1	1 - 5

Note: The above components and their percentages are provided for health and safety purposes, ONLY. This document should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

SECTION 4 FIRST AID MEASURES

Eyes	If foreign matter enters eyes, immediately flush with large amounts of potable water for at least 15 minutes or until irritation subsides. Get medical attention if irritation persists.
Skin	Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing.
Inhalation	Remove affected person from source of exposure. Consult a doctor if you feel unwell.
First-Aid, Ingestion	Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention if unusual reaction is noted.
Symptoms, Acute & Delayed Immediate Medical Attention	Refer to Section 11 - Toxicological Information 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

SECTION 5 FIRE FIGHTING MEASURES

Fire Hazard	Combustible liquid
Explosion Hazard	Containers can burst violently or explode when heated, due to excessive pressure build-up. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk.
Flash Point	≈ 91.1 °C (195.98 °F)
Hazardous Products of Combustions	Carbon Monoxide, Carbon Dioxide
Extinguishing Media	Dry chemical, Carbon Dioxide, water spray, foam or sand
Unsuitable Extinguishing Media	Do not use a heavy water stream
Firefighting instructions	Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection Gear	Do not enter fire area without proper protective equipment, including respiratory protection.

ABBREVIATION KEY

ASTM = American Society for Testing and Materials (International)

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SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal Precautions	Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking. Use personal protective equipment as required during use. Evacuate unnecessary personnel. Avoid breathing dust/fumes/gas/mist/vapors.
Environmental Precautions	Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.
Method and Materials for Containment & Clean Up	Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

SECTION 7 HANDLING AND STORAGE

Handling	Use this product with adequate ventilation. Avoid breathing vapors and fumes. Prevent formation of aerosols. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge. Wash thoroughly after handling. Use personal protective equipment as described in Section 8.
Storage	Store indoors in a cool, dry, well-ventilated area. Do not handle or store near an open flame, heat or other sources of ignition. Keep container tightly closed. Keep product away from strong acids and alkali

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

Occupational Exposure Limits

COMPONENT	CAS NUMBER	OSHA PEL	ACGIH TLV	NIOSH
Toluene	108-88-3	375 mg/m ³ TWA	20 ppm TWA	375 mg/m ³ TWA
Methanol	67-56-1	260 mg/m ³ TWA	260 mg/m ³ TWA	260 mg/m ³ TWA

PERSONAL PROTECTIVE EQUIPMENT

Pictographs



Eyes/Face

Safety glasses with side shields

Follow the national guidelines concerning the use of protective eye wear.

Hand

Protective Gloves

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary

Skin/Body

Normal work clothing (long sleeved shirts, long pants and smooth bottom work shoes) is recommended.

Inhalation

Use NIOSH or MSHA approved respiratory protective equipment when airborne exposure limits are exceeded.

ABBREVIATION KEY

NIOSH = National Institute for Occupational Safety
 OSHA = Occupational Safety & Health Administration
 ACGIH = American Conference of Governmental Industrial Hygiene
 MSHA = Mine Safety and Health Administration

PEL = Permissible Exposure Level
 TLV = Threshold Limit Value
 TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

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SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	White
Odor	characteristic
Odor Threshold	No data available
pH	No data available
Relative Evaporation Rate	No data available
Melting Point	No data available
Boiling Point	≈ 100 °C (132.98 °F)
Flash Point	≈ 91.1 °C (195.98 °F)
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Specific Gravity (H₂O =1)	≈ 1.078
Density	≈ 1.08 g/cm ³
Vapor pressure	No data available
Vapor Density (AIR=1)	No data available
Solubility in Water	Soluble in water
VOC content	≈ 179 g/l

SECTION 10 STABILITY AND REACTIVITY

Stability	Stable at room temperature in closed containers under advised storage and handling conditions.
Reactivity	Upon combustion CO and CO ₂ are formed
Conditions to Avoid	Extremely high or low temperatures. Open flame.
Incompatible materials	Strong acids. Strong bases.
Hazardous Decomposition	Carbon monoxide, carbon dioxide, fume, may release flammable gases
Hazardous Polymerization	Will not occur

SECTION 11 TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

Eyes	
Acute (Immediate)	Symptoms may include stinging, tearing, redness, swelling, and blurred vision
Chronic (Delayed)	Causes eye irritation
Skin	
Acute (Immediate)	Prolonged skin contact may cause dryness, redness or cracking
Chronic (Delayed)	No data available
Inhalation	
Acute (Immediate)	Irritation to mucus membranes and respiratory tract, nausea, dizziness and headache
Chronic (Delayed)	Causes damage to organs.
Ingestion	
Acute (Immediate)	Harmful if swallowed.
Chronic (Delayed)	No data available

ABBREVIATION KEY

IARC = International Agency for Research on Cancer
NTP = National Toxicology Program
ACGIH = American Conference of Governmental Industrial Hygiene

LD₅₀ = Lethal dose, 50 percent
LC₅₀ = Lethal concentration, 50 Percent
STOT = Specific Target Organ Toxicity

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SECTION 11 TOXICOLOGICAL INFORMATION

Component Analysis

COMPONENT	CAS NUMBER	ORAL LD50 (mg/kg)	DERMAL LD50 (mg/kg)	INHALATION LC50 (mg/L)
Toluene	108-88-3	>2,000 (rat)	>12,223 (rabbit)	> 20 (rat) 4 hr
Methanol	67-56-1	>2,769 (rat)	>15,800 (rabbit)	> 85 (rat) 4 hr

Component Carcinogenicity

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by IRCA, OSHA and NTP.

Teratogenicity

Suspected of damaging the unborn child. Some evidence of adverse effects on development, based on animal experiments.

Mutagenicity

Based on available data, the classification criteria are not met.

STOT Single Exposure

May cause drowsiness or dizziness.

STOT Repeated Exposure

May cause damage to organs (central nervous system) through prolonged or repeated exposure (Dermal, Inhalation, oral).

Eco toxicity

COMPONENT	CAS NUMBER	FISH LC50 (mg/L)	DAPHNA EC50 (mg/L)	ALGAE EC50 (mg/L)
Toluene	108-88-3	>24 (rainbow trout) 96 Hours	11.5 - 19.6 (Water flea) 48 Hours	N/A
Methanol	67-56-1	>5.5 (coho salmon) 96 Hours	3.78 (Water flea) 48 Hours	N/A

Persistence & Degradability

Toluene (108-88-3)
aerobic - Exposure time 20 d
Result: 86 % - Readily biodegradable.
Remarks: (IUCLID)

Bioaccumulative potential

Toluene (108-88-3)
Leuciscus idus (Golden orfe) - 3 d
- 0.05 mg/l

Soil Absorption/Mobility

No Data

Ozone-Depletion Potential

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B)

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal Methods:

The transportation, storage, treatment and dispose of this waste must be conducted in accordance with all applicable federal, state and local regulations. Handle empty containers with care because residual vapors are flammable.

Disposal Methods:

Avoid release to the environment.

SECTION 14 TRANSPORT INFORMATION

Classification (TDG & DOT)

3 Combustible liquid, NOS

Identification Number

UN1993

Shipping name

Adhesives

Packaging group

III - Minor Danger

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IARC = International Agency for Research on Cancer
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LD50 = Lethal dose, 50 percent
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SECTION 15 REGULATORY INFORMATION

TSCA Inventory Components are listed
DSL Inventory Components are listed
Sara 302 None
Sara 304 Methanol (67-56-1); 5,000 lb
 Toluene (108-88-3); 1,000 lb
Sara 311/312 Categories Acute Health Hazard; Chronic Health Hazard;
Sara 313 **Toluene** (108-88-3); **Methanol** (67-56-1);
Clean Air Act The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61): **Toluene** (108-88-3); **Methanol** (67-56-1);
 This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
 The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489): **Toluene** (108-88-3); **Methanol** (67-56-1);
CA Proposition 65 **WARNING:** This product can expose you to chemicals including toluene and which are known to the State of California to cause birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

Right to Know States

COMPONENT	CAS NUMBER	MA	MN	NJ	PA	RI
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes
Methanol	67-56-1	Yes	Yes	Yes	Yes	Yes

SECTION 16 OTHER INFORMATION

Preparation Date January 2021
Revision Date January 2022
Summary of Changes Branding update
Disclaimer The information and recommendations contained herein are to the best of Performance Roof Systems' knowledge and belief, accurate and reliable as of the date issued. Performance Roof Systems does not warrant or guarantee their accuracy or reliability, and Performance Roof Systems shall not be liable for any loss or damage arising out of the use thereof.
 The information and recommendations are offered for the users consideration and examination, and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use. It is also the users responsibility to make certain that it is relying upon the most recent, updated, information and recommendations available from Performance Roof Systems.

ABBREVIATION KEY

TSCA = Toxic Substances Control Act

DSL = Domestic Substances List (Canada)