

# SAFETY DATA SHEET

## SENTINEL® S BONDING ADHESIVE



### SECTION 1 IDENTIFICATION

**Product Name** SENTINEL® S Bonding Adhesive  
**Recommended Use** Adhesive for adhering SENTINEL® PVC membranes  
**Manufacturer** Performance 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 2  
Eye Irritation: Category 2A  
STOT: Single Exposure: Category 3  
STOT: Repeat Exposure: Category 2

**Hazard Pictographs**



**Signal Word**

**DANGER**

**Hazard Statements**

H225 - Highly flammable liquid and vapor  
H319 - Causes serious eye irritation  
H336 - May cause drowsiness or dizziness  
H373 - May cause damage to organs (central nervous system) through prolonged or repeated exposure (Dermal, Inhalation, oral)

**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  
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  
P308+P313 - If exposed or concerned, get medical advice/attention  
P337+P313 - If eye irritation persists get medical advice/attention.  
P370+P378 - In case of fire: Use carbon dioxide (CO<sub>2</sub>), 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

<b>Storage</b>	P403+P235 - Store in well-ventilated place. Keep cool P405 - Store locked up
<b>Disposal</b>	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
Acetone	67-64-1	55 - 75
Toluene	108-88-3	1 - 5
4-chlorobenzotrifluoride	98-56-6	< 1

**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

<b>Eyes</b>	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.
<b>Skin</b>	Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing.
<b>Inhalation</b>	Remove affected person from source of exposure. Call a POISON CENTER/doctor/physician if you feel unwell.
<b>First-Aid, Ingestion</b>	Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention if unusual reaction is noted.
<b>Symptoms, Acute &amp; Delayed Immediate Medical Attention</b>	<b>Refer to Section 11 - Toxicological Information</b> 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

<b>Fire Hazard</b>	Highly flammable liquid and vapor.
<b>Explosion Hazard</b>	May form flammable/explosive vapor-air mixture.
<b>Flash Point</b>	≈ 1.4 °F (-17 °C)
<b>Hazardous Products of Combustions</b>	Carbon Monoxide, Carbon Dioxide
<b>Extinguishing Media</b>	Foam, Carbon dioxide (CO <sub>2</sub> ), Dry powder
<b>Unsuitable Extinguishing Media</b>	Do not use a heavy water stream
<b>Firefighting instructions</b>	Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
<b>Protection Gear</b>	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

<b>Personal Precautions</b>	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.
<b>Environmental Precautions</b>	Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.
<b>Method and Materials for Containment &amp; Clean Up</b>	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

<b>Handling</b>	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. <b>Use personal protective equipment as described in Section 8.</b>
<b>Storage</b>	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
Acetone	67-64-1	2,400 mg/m <sup>3</sup> TWA	590 mg/m <sup>3</sup> TWA	590 mg/m <sup>3</sup> TWA
Toluene	108-88-3	375 mg/m <sup>3</sup> TWA	200 ppm TWA	375 mg/m <sup>3</sup> 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

<b>Physical State</b>	Liquid
<b>Appearance</b>	amber
<b>Odor</b>	characteristic
<b>Odor Threshold</b>	No data available
<b>pH</b>	No data available
<b>Relative Evaporation Rate</b>	No data available
<b>Melting Point</b>	No data available
<b>Boiling Point</b>	≈ 133 °F (56 °C)
<b>Flash Point</b>	≈ 1.4 °F (-17 °C)
<b>Auto-ignition Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Specific Gravity (H<sub>2</sub>O =1)</b>	≈ 0.849
<b>Density</b>	≈ 0.85 g/cm <sup>3</sup>
<b>Vapor pressure</b>	No data available
<b>Vapor Density (AIR=1)</b>	No data available
<b>Solubility in Water</b>	Poorly soluble in water
<b>VOC content</b>	≈ 199.4 g/l

### SECTION 10 STABILITY AND REACTIVITY

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

### SECTION 11 TOXICOLOGICAL INFORMATION

#### POTENTIAL HEALTH EFFECTS

##### Eyes

<b>Acute (Immediate)</b>	Conjunctivitis, irritation, tearing and burning
<b>Chronic (Delayed)</b>	No data available

##### Skin

<b>Acute (Immediate)</b>	May cause irritation to the skin.
<b>Chronic (Delayed)</b>	No data available

##### Inhalation

<b>Acute (Immediate)</b>	May cause respiratory irritation. May cause drowsiness or dizziness
<b>Chronic (Delayed)</b>	Causes damage to organs.

##### Ingestion

<b>Acute (Immediate)</b>	Product is not intended nor is it likely to be ingested or eaten.
<b>Chronic (Delayed)</b>	No data available

ABBREVIATION KEY

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

LD<sub>50</sub> = Lethal dose, 50 percent  
LC<sub>50</sub> = Lethal concentration, 50 Percent  
STOT = Specific Target Organ Toxicity

**SECTION 11 TOXICOLOGICAL INFORMATION**

**Component Analysis**

COMPONENT	CAS NUMBER	ORAL LD50 (mg/kg)	DERMAL LD50 (mg/kg)	INHALATION LC50 (mg/L)
Acetone	67-64-1	>5,800 (rat)	>20,000 (rabbit)	> 76(rat) 4 hr
Toluene	108-88-3	>2,000 (rat)	>12,223 (rabbit)	> 20 (rat) 4 hr
4-chlorobenzotrifluoride	98-56-6	>5,546 (rat)	>3,300 (rabbit)	> 33 (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.

**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)
Acetone	67-64-1	>6,210 (fathead minnow) 96 Hours	>8,800 (Water flea) 48 Hours	N/A
Toluene	108-88-3	>24 (rainbow trout) 96 Hours	11.5 - 19.6 (Water flea) 48 Hours	N/A
4-chlorobenzotrifluoride	98-56-6	>3 (Danio rerio) 96 Hours	3.66 (Water flea) 48 Hours	N/A

**Persistence & Degradability**

Readily biodegradable.

**Bioaccumulative potential**

Low potential for bioaccumulation

**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**

<b>Classification (TDG &amp; DOT)</b>	3 Flammable liquids
<b>Identification Number</b>	UN1133
<b>Shipping name</b>	Adhesives
<b>Packaging group</b>	II - Medium Danger

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**SECTION 15 REGULATORY INFORMATION**

**TSCA Inventory** Components are listed  
**DSL Inventory** Components are listed  
**Sara 302** None  
**Sara 304** Acetone (67-64-1); 5,000 lb  
 Toluene (108-88-3); 1,000 lb  
**Sara 311/312 Categories** Acute Health Hazard; Chronic Health Hazard; Fire Hazard  
**Sara 313** Toluene (108-88-3); Acetone (67-64-1);  
**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);  
 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 Intermediate or Final VOC's (40 CFR 60.489): **Toluene** (108-88-3);  
**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](http://www.P65Warnings.ca.gov).

**Right to Know States**

COMPONENT	CAS NUMBER	MA	MN	NJ	PA	RI
Acetone	67-64-1	Yes	Yes	Yes	Yes	Yes
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes
4-chlorobenzotrifluoride	98-56-6	No	No	Yes	Yes	No

**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  
 IARC = International Agency for Research on Cancer

DSL = Domestic Substances List (Canada)