

EverGuard® Steep Slope TPO Bonding Adhesive

Material Safety Data Sheet

Updated: 11/08



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GAF Materials Corporation
Material Safety Data Sheet
MSDS # 2106
MSDS Date: November 2008

SECTION 1: PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: EverGuard® Steep Slope TPO Bonding Adhesive

TRADE NAME: N/A

CHEMICAL NAME / SYNONYM: N/A

CHEMICAL FAMILY: Hydrocarbons

MANUFACTURER: GAF Materials Corporation

ADDRESS: 1361 Alps Road, Wayne, NJ 07470

24 HOUR EMERGENCY PHONE: (CHEMTREC) 800 – 424–9300

INFORMATION ONLY: 800 – 766 – 3411

PREPARED BY: Sean Connolly

APPROVED BY: Phil Curry

NFPA Hazard Rating

HMIS Hazard Rating

Health	2
Flammable	3
Reactive	0
Special Hazards	-

2
3
0
-

Health	2
Flammable	3
Reactive	0
Personal Protection	X

2
3
0
X

OSHA HAZARDOUS: Yes X

No

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

OCCUPATIONAL EXPOSURE LIMITS

CHEMICAL NAME	CAS #	% (BY WT)	OSHA	ACGIH	OTHER
Toluene	108-88-3	30 – 40	200 ppm 300 ppm – ceiling	20 ppm	REL: 100 ppm
Acetone	67-64-1	20 – 30	1000 ppm	500 ppm 750 ppm – STEL	REL: 250 ppm

OCCUPATIONAL EXPOSURE LIMITS

CHEMICAL NAME	CAS #	% (BY WT)	OSHA	ACGIH	OTHER
Solvent Naphtha (Petroleum), Light Aliphatic	64742-89-8	5 – 10	300 ppm	NE	NE
n-Hexane	110-54-3	5 – 10	500 ppm	50 ppm	REL: 50 ppm
Cyclohexane	110-82-7	1.5 – 5	300 ppm	100 ppm	REL: 300 ppm
n-Heptane	142-82-5	1 – 1.5	500 ppm	400 ppm 500 ppm – STEL	REL: 85 ppm
Ethyl Benzene	100-41-4	0.1 – 0.5	100 ppm	100 ppm	REL: 100 ppm

NE = Not Established

SECTION 3: HAZARDS IDENTIFICATION

PRIMARY ROUTE OF EXPOSURE: Inhalation, Skin absorption, Skin contact, Eye Contact, Ingestion

SIGNS & SYMPTOMS OF EXPOSURE

- Eyes:** Can cause eye irritation. Symptoms include stinging, tearing, redness and swelling of eyes.
- Skin:** Can cause skin irritation. Symptoms may include redness and burning of skin and other skin damage. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, and drying and cracking of skin, skin burns and other skin damage.
- Ingestion:** Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.
- Inhalation:** Breathing of vapor or mist is possible. Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable. May cause allergic respiratory reaction.

ACUTE HEALTH HAZARDS: May affect the central nervous system causing dizziness, headache or nausea. May cause allergic respiratory reaction. May cause eye, skin and respiratory tract irritation. Signs and symptoms of exposure to this material through breathing, swallowing, and/or

passage of the material through the skin may include: metallic taste, stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), runny nose, central nervous system excitation (giddiness, liveliness, light-headed feeling) followed by central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness) and other central nervous system effects, weakness, temporary changes in mood and behavior, loss of appetite, lack of coordination, respiratory depression (slowing of the breathing rate), confusion, irregular heartbeat, high blood sugar, anesthesia, narcosis (dazed or sluggish feeling), discomfort in the chest and coma.

CHRONIC HEALTH HAZARDS:

Exposure to this material (or a component) has been found to cause kidney damage in male rats. The mechanism by which this toxicity occurs is specific to the male rat and the kidney effects are not expected to occur in humans. This material (or a component) shortens the time of onset or worsens the liver and kidney damage induced by other chemicals. Prolonged and repeated exposure to n-hexane may cause peripheral neuropathy by damaging peripheral nerve tissue (that of the arms and legs) and result in muscular weakness and loss of sensation. Prolonged intentional toluene abuse may lead to hearing loss progressing to deafness. In addition, while noise is known to cause hearing loss in humans, it has been suggested that workers exposed to organic solvents, including toluene, along with noise may suffer greater hearing loss than would be expected from exposure to noise alone. Prolonged intentional toluene abuse may lead to damage to many organ systems having effects on: central and peripheral nervous systems, vision, hearing, liver, kidneys, heart and blood. Such abuse has been associated with brain damage characterized by disturbances in gait, personality changes and loss of memory. Comparable central nervous system effects have not been shown to result from occupational exposure to toluene. Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: blood abnormalities, effects on hearing, nasal damage, respiratory tract damage (nose, throat, and airways), nervous system damage, liver damage, liver abnormalities, kidney damage, kidney abnormalities, testis damage, central nervous system damage and lung damage. Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans: kidney damage, visual impairment and central nervous system effects.

CARCINOGENICITY:

Ethyl Benzene is classified as a 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

SECTION 4: FIRST AID MEASURES

FIRST AID PROCEDURES**EYES:**

If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes

while holding eyelids apart; seek immediate medical attention.

SKIN: Remove contaminated clothing. Flush exposed area with large amounts of water. If skin is damaged, seek immediate medical attention. If skin is not damaged and symptoms persist, seek medical attention. Launder clothing before reuse.

INHALATION: If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

INGESTION: Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material. This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity when deciding whether to induce vomiting. This material (or a component) has produced hyperglycemia and ketosis following substantial ingestion.

SECTION 5: FIRE FIGHTING PROCEDURES

SUITABLE EXTINGUISHING MEDIA: Dry chemical, Carbon dioxide (CO₂)

HAZARDOUS COMBUSTION PRODUCTS: Carbon dioxide, carbon monoxide and various hydrocarbons

RECOMMENDED FIRE FIGHTING PROCEDURES: Material is volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, flames, sparks, heaters, smoking, electric motors, static discharge or other ignition sources at locations near the material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Wear full firefighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

UNUSUAL FIRE & EXPLOSION HAZARDS: Flammable Liquid Class IB

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Prevent spreading over a wide area (e.g. by containment or oil barriers).

Do not let product enter drains. Do not flush into surface water or sanitary sewer system. Local authorities should be advised if significant spillages cannot be contained. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Comply with all applicable federal, state, and local regulations. Suppress (knock down) gases/vapours/mists with a water spray jet.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE:

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet should be observed. Static ignition hazard can result from handling and use. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Special precautions may be necessary to dissipate static electricity for non-conductive containers. Use proper bonding and grounding during product transfer as described in National Fire Protection Association document NFPA 77. Store in a cool, dry, ventilated area, away from incompatible substances. Keep containers closed when not in use. Do not store near extreme heat, open flame or sources of ignition.

OTHER PRECAUTIONS:

None.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING CONTROLS /
VENTILATION:**

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

RESPIRATORY PROTECTION:

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

EYE PROTECTION:

Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.

SKIN PROTECTION:

Wear normal work clothing including long pants, long-sleeved shirts and foot covering to prevent direct contact of the product with the

skin. Launder clothing before reuse. If skin irritation develops, contact your facility health and safety professional or your local safety equipment supplier to determine the proper personal protective equipment for your use.

OTHER PROTECTIVE EQUIPMENT: N/A

WORK HYGIENIC PRACTICES: See above.

EXPOSURE GUIDELINES: N/A

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE & ODOR:	Amber liquid, characteristic odor		
FLASH POINT:	0 °F / - 17.78 °C	LOWER EXPLOSIVE LIMIT:	No data
METHOD USED:	Seta closed cup	UPPER EXPLOSIVE LIMIT:	No data
EVAPORATION RATE:	> 1	BOILING POINT:	55 – 143 °C / 131 – 289 °F
pH (undiluted product):	No data	MELTING POINT:	No data
SOLUBILITY IN WATER:	immiscible in water	SPECIFIC GRAVITY:	0.87 g/cm ³ 7.25 lb/gal
VAPOR DENSITY:	No data	PERCENT VOLATILE:	659.1 g/L
VAPOR PRESSURE:	46.1 hPa	MOLECULAR WEIGHT:	No data
VOC WITH WATER (LBS/GAL):	No data	WITHOUT WATER (LBS/GAL):	No data

SECTION 10: STABILITY AND REACTIVITY

THERMAL STABILITY: **STABLE** **UNSTABLE**

CONDITIONS TO AVOID (STABILITY): None known.

INCOMPATIBILITY (MATERIAL TO AVOID): Strong acids, strong oxidizing agents, acids, alkalis and reducing agents

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Carbon dioxide, carbon monoxide and hydrocarbons.

HAZARDOUS POLYMERIZATION: Product will not undergo hazardous polymerization.

SECTION 11: TOXICOLOGICAL INFORMATION**TOXICOLOGICAL
INFORMATION:****Acute oral toxicity**

Toluene	LD 50 Rat: 2,600 – 7,500 mg/kg
Acetone	LD 50 Rat: 5,800 mg/kg
Solvent Naphtha (Petroleum), Light Aliphatic	LD 50 Rat: > 8,000 mg/kg
N-Hexane	LD 50 Rat: 25 g/kg
Cyclohexane	LD 50 Mouse: 1,300 mg/kg LD 50 Rat: 29,820 mg/kg
N-Heptane	LD 50 Rat: > 15,000 mg/kg
Ethyl Benzene	LD 50 Rat: 3,500 mg/kg

Acute inhalation toxicity

Toluene	LC 50 Rat: 8000 ppm, 4 h
Acetone	LC 50 Rat: > 16000 ppm, 4 h
Solvent Naphtha (Petroleum), Light Aliphatic	LC 50 Rat: 3400 ppm, 4 h
N-Hexane	LC 50 Rat: 48000 ppm, 4 h
Cyclohexane	LC 50 Rat: > 4044 ppm
N-Heptane	LC 50 Rat: 103 g/m ³ , 4 h
Ethyl Benzene	LC Lo Rat: 4000 ppm, 4 h

Acute dermal toxicity

Toluene	LD 50 Rabbit: 12,124 mg/kg
Acetone	LD 50 Rabbit: > 20,000 mg/kg
Solvent Naphtha (Petroleum), Light Aliphatic	LD 50 Rat: > 4,000 mg/kg
N-Hexane	LD 50 Rabbit: > 1.3 g/kg
Cyclohexane	LD 50 Rabbit: > 2.0 g/kg
N-Heptane	LD 50 Rabbit: > 2,001 mg/kg
Ethyl Benzene	LD 50 Rabbit: 17,800 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No information available.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: This product, as supplied, is regulated as a hazardous waste by the U.S. Environmental Protection Agency (EPA) under Resource Conservation and Recovery Act (RCRA) regulations. If discarded in its purchased form, this product is a RCRA hazardous waste. It is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or residue of the product remains classified a hazardous waste as per 40 CFR 261, Subpart C. State or local regulations may also apply if they differ from the federal regulation.

RCRA HAZARD CLASS: D001, Ignitable Hazardous Waste

SECTION 14: TRANSPORTATION INFORMATION

U.S. DOT TRANSPORTATION

PROPER SHIPPING NAME: Adhesives (Toluene, Acetone)

HAZARD CLASS: 3

ID NUMBER: UN1133

PACKING GROUP: II

LABEL STATEMENT: N/A

OTHER: N/A

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA: All components are listed on the TSCA inventory.

CERCLA: CERCLA Hazardous Substances (40 CFR 302) – 2574 lbs

Reportable Quantity – Components

Toluene: 108-88-3, 1000 lbs
 Acetone: 67-64-1, 5000 lbs
 n-Hexane: 110-54-3, 5000 lbs
 Cyclohexane: 110-82-7, 1000 lbs
 Ethyl Benzene: 100-41-4, 1000 lbs

SARA:

311/312 HAZARD CATEGORIES: Fire Hazard, Acute Health Hazard, Chronic Health Hazard

313 REPORTABLE INGREDIENTS: Toluene: 108-88-3, 38.84%
 n-Hexane: 110-54-3, 6.4%
 Cyclohexane: 110-82-7, 1.7%
 Ethyl Benzene: 100-41-4, 0.26%

CALIFORNIA PROPOSITION 65: This product contains a chemical known to the state of California to cause cancer and birth defects or other reproductive harm. Cancer: Cadmium Oxide, Lead Oxide, Formaldehyde, 2-Chloro-1,3-Butadiene, Quartz / Sand, Benzene, Ethyl Benzene. Reproductive: Toluene, Benzene, Lead Oxide, Cadmium Oxide.

Other state regulations may apply. Check individual state requirements. The following components appear on one or more of the following state hazardous substances lists:

Chemical Name	CAS #	CA	MA	MN	NJ	PA	RI
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes	Yes
Acetone	67-64-1	Yes	Yes	Yes	Yes	Yes	Yes
Solvent Naphtha (Petroleum), Light Aliphatic	64742-89-8	No	No	No	No	No	No
n-Hexane	110-54-3	Yes	Yes	Yes	Yes	Yes	Yes
Cyclohexane	110-82-7	Yes	Yes	Yes	Yes	Yes	Yes
n-Heptane	142-82-5	Yes	Yes	Yes	Yes	Yes	Yes
Ethyl Benzene	100-41-4	Yes	Yes	Yes	Yes	Yes	Yes

SECTION 16: OTHER INFORMATION

ADDITIONAL COMMENTS: None

DATE OF PREVIOUS MSDS: New MSDS

CHANGES SINCE PREVIOUS MSDS: N/A

This information relates to the specific material designated and may not be valid for such material used on combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the date compiled. However, no representation, warranty or guarantee, expressed or implied, is made as to its accuracy, reliability, or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his particular use. We do not accept liability for any loss or damage that may occur from the use of this information. Nothing herein shall be construed as a recommendation for uses which infringe valid patents or as extending a license of valid patents.