# SAFETY DATA SHEET

# SDS# 1000B

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Atactic Polypropylene (APP) Modified Bitumen Roofing Sheets
CAS #: Mixture (Article)
Generic Name: Modified Bitumen Roll Roofing
Chemical Name: Asphalt Mixture (Article)
Chemical Family: N/A

Manufacturer Information
U.S. PLY, INC.
P.O. Box11740
Fort Worth, TX 76110

Non-Emergency Telephone
(866) 787-4759 or (817) 413-0103
Internet Website: www.usply.com
Emergency: 1-800-424-9300 (Chemtrec)

Trade Name: DURAWELD 4M APP ULTRA WHITE, DURAWELD 4MFR APP ULTRA WHITE, TUFFCAP 190M APP ULTRA WHITE, ALL WEATHER 190 GRANULATED ULTRA WHITE,

## 2. HAZARDS IDENTIFICATION

As defined in the OSHA Hazard Communication Standard, 29 CFR 1910.1200, the products listed below are considered articles and do not require an SDS. In addition, articles are not included in the scope of the Globally Harmonization System (GHS). As such, the GHS labeling elements are not included on this SDS. All components listed for this product are bound within the product. When the products are handled as intended and under normal conditions of use, there is no evidence that any of the ingredients are released in amounts that pose a significant health risk. Although these products are not subject to the OSHA Standard or GHS labeling elements US Ply shall disclose as much health and safety information as possible to ensure that this product is handled and used properly. This SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and be made available for employees and other users of this product. In addition, the recommendations for handling and use of these products should be included in worker safety training programs.

**ADDITIONAL HAZARD INDENTICATION INFORMATION:**

**General:** Under normal use conditions, this product is not expected to create any unusual emergency hazards.

**Appearance and Odor:** Black sheet in roll form. Surfaces may include roofing granules, sand, slag, talc or a polyethylene film. Slight asphaltic odor when heated.

**Potential Health Hazards:**

**Primary Exposure Routes**

Primary: Nuisance dust - inhalation, irritation - skin and eye contact.

Eye Contact: May cause irritation to the eyes. Eye irritation may be treated by flushing eyes with large amounts of water. If irritation persists, seek medical attention. Contact with hot product is abnormal and a possible emergency circumstance because of its adhesive and temperature features, the molten asphalt contact with eyes may cause physical eye damage due to adhesive properties as well as thermal burns. Seek medical attention immediately in case of eye contact with molten asphalt contact.

Skin Contact: May cause irritation (itching) to the skin. Skin irritation may be treated by gently washing affected area with soap and warm water. Contact with molten asphalt can result in physical injury/damage and thermal burns. Seek medical attention immediately in case of molten asphalt contact.

Ingestion: This product is not intended to be ingested. If ingested, it may cause irritation of the digestive system.

Inhalation: May cause irritation of the upper respiratory tract. Acute exposure may irritate mucous membranes with tightness in chest, coughing, wheeziness, or congestion. Individuals affected should be moved to fresh air.

**Acute Health Hazards:**

NIOSH has found that studies of workers exposed to asphalt fumes have repeatedly found irritation of the serous membranes of the conjunctivae (eye irritation) and the mucous membranes of the upper respiratory tract (nasal and throat irritation).

**Chronic Health Hazards**:

Occupational exposures to asphalt, oxidized asphalt, silica and formaldehyde, which may occur from these products during abnormal conditions of use or emergencies, have been found to be probable or known human carcinogens, and may cause serious irreversible lung disease and other non-cancerous effects. See Section 11 of this document.

**Medical Conditions Aggravated by Exposure:**

Exposure to dust may aggravate pre-existing upper respiratory and lung diseases or conditions.

## 3. COMPOSITION INFORMATION ON INGREDIENTS

This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

| Chemical Name | Common Name and synonyms | CAS # | Percent Weight | Trade Secret |
|---|---|---|---|---|
| Asphalt | Asphalt | 8052-42-4 | 45-65 | ~ |
| Calcium Carbonate | Limestone | 1317-65-3 | 25-35 | |
| Polypropylene (atactic and isotactic) | Polypropylene | 9003-07-0 | 20-30 | ~ |
| Crystalline Silica | Rose quartz/sand | 14808-60-7 | 0.1-1 | |
| Reflective Granules (see note below) | Roofing Granules | n/a | 20-30 | ~ |
| Calcium Borate | Colemanite | 12007-56-6 | 0-30 | ~ |
| Polyester fiber | Polyester fiber | n/a | 0-10 | ~ |
| Fiberglass Mat or Filament glass fiber | Fiberglass Mat or Filament glass fiber | 65997-17-3 | 0-5 | ~ |
| Polyethylene | Polyethylene | 9002-88-4 | 0-1 | ~ |
| Titanium Dioxide | Titanium Dioxide | 13463-67-7 | 0-1 | ~ |
| There are no additional ingredients present which, within the current knowledge of the supplier and/or in the concentrations applicable, are classified as hazardous to the health or environment and would hence require reporting in this section. | | | | |

Granules are used only on products with an M suffix and an FR suffix. It is not used on products with an S suffix.

Composition of Reflective Granule:

| Components | CAS NO | Weight % |
|---|---|---|
| SiO2 (Quartz) | 14808-60-7 | 40-55 |
| P2O5 | 1314-56-3 | 5-15 |
| Al2O3 | 1344-28-1 | 10-20 |
| CaO | 1305-78-8 | 10-20 |
| K2O | 12136-45-7 | 1-5 |
| MgO | 1309-48-4 | 2-15 |
| Fe2O3 | 1309-37-1 | <0.5 |
| Na2O | n/a | < 4.0 |

Further information on the reflective granule can be found by referring to the granule manufacturer's SDS # J253-WA-G-022

Calcium Borate (colemanite) are used only in products with an FR suffix. It is not used on products without an FR suffix.

DuraWeld, TuffCap, All Weather 190, and USP 160 brand products use polyester fiber and may also contain a filament glass fiber.

Polyethylene is used as a bottom film surfacing on DuraWeld, TuffCap, and All Weather products.

## 4. FIRST AID MEASURES

General: During installation, this product may release dust or fumes. Due to the large size of the particles, minimal exposure to airborne dust is expected. Primarily a nuisance dust. Asphalt and its fumes can irritate the skin, eyes and upper respiratory tract. If dust or fumes are inhaled to excess (e.g. in a confined work space) irritation of the upper respiratory tract may occur. See Section 11 for more details.

Inhalation: If breathing difficulty is experienced, move to a fresh air place. Drink water to clear throat and blow nose to remove dust. If difficulty persists,* seek medical attention.

Skin Contact: Wash gently with soap and warm water to remove dust and fibers. For molten asphalt contact, cool with ice or water. Do not attempt to remove asphalt immediately. Cover with petroleum jelly (Vaseline). Remove the asphalt has softened. If irritation develops, use a delicate cream. If symptoms persist, in case of redness or blistering seek medical attention for burn treatment.

Eye Contact: Do not rub or scratch eyes. Dust particles may cause the eye to be scratched. Bathe eye immediately with a large amount of water for at least 15 minutes. If irritation persists, seek medical attention immediately.

Ingestion: This product is not intended to be ingested. If ingested, it may cause temporary irritation to the digestive system. Rinse mouth with water to remove fibers, and drink plenty of water to help reduce the irritation.

Most important symptoms /effects, acute and delayed indication of immediate medical and special treatment needed:

Upper respiratory passages, skin and eyes are primary exposure routes. As with any dust, pre-existing upper respiratory and lung diseases or conditions that may be aggravated.

Physicians note: Treat symptomatically.

## 5. FIRE FIGHTING MEASURES

Suitable extinguishing media: Dry chemical, dry powder, CO2, foam, water fog or water spray.

Hazardous combustion products: Carbon dioxide and carbon monoxide.

Fire-fighting Equipment instructions: No special procedures are expected to be necessary for this product. Normal firefighting procedures should be followed such as standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Unusual fire and explosive hazards: n/a

## 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: N/A

Environmental Precautions: Pick up large pieces of material. Vacuum dusts. If sweeping is necessary, use a dust suppressant such as water. Do not dry sweep dust accumulation. These procedures will help to minimize potential exposures.

Clean-up Methods: This product, as supplied, is not regulated as a hazardous waste by the U.S. Environmental Protection Agency (EPA) under Resource Conversation and Recovery Act (RCRA) regulations. Comply with state and local regulations for disposal. If you are unsure of the regulations, contact the local Public Health Department, or the local office of the EPA.

## 7. HANDLING AND STORAGE

Handling: Use protective equipment as described in Section 8 of this material safety data sheet when handling uncontained material. Avoid direct exposure to very high heat or flame.

Storage: Store standing upright on end. Material should be kept dry, and protected from the elements. Recommended storage temperature is between 55°F to 95°F (12.7°C to 35°C). Warehouse storage should be in accordance with package directions.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Read all product instructions before using. No ACGIH or OSHA PEL is assigned to this mixture.
. Exposure limits for the component materials are shown below.
. This product, as supplied, is not believed to contain any hazardous material that exceeds exposure limits established by OSHA.

| Components | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|---|---|---|---|
| Asphalt (CAS 8-52-42-4) | TWA: 0.5 mg/m$^3$ benzene soluble aerosol fume, inhalable fraction | - | Ceiling: 5 mg/m$^3$ fume 15 min |
| Calcium Carbonate (CAS 1317-65-3) | - | TWA: 15 mg/m$^3$ total dust<br>TWA: 5 mg/m$^3$ respirable fraction<br>(vacated) TWA: 15 mg/m$^3$ total dust<br>(vacated) TWA: 5 mg/m$^3$ respirable fraction | TWA: 10 mg/m$^3$ total dust<br>TWA: 5 mg/m$^3$ respirable dust |
| Crystalline silica (quartz) (CAS 14808-60-7) | TWA: 0.025 mg/m$^3$ respirable fraction | (vacated) TWA: 0.1 mg/m$^3$ respirable dust<br>: (30)/(%SiO2 + 2) mg/m$^3$ TWA total dust<br>: (250)/(%SiO2 + 5) mppcf TWA respirable fraction<br>: (10)/(%SiO2 + 2) mg/m$^3$ TWA respirable fraction | IDLH: 50 mg/m$^3$ respirable dust<br>TWA: 0.05 mg/m$^3$ respirable dust |
| Calcium Borate (colemanite) (12007-56-6) | - | - | 15 mg/m³ |
| Continuous filament glass fibers (CAS 65997-17-3) | 1 fiber/cm³ TWA - respirable fibers | - | 5 mg/m³ - TWA (inhalable fraction) |
| Titanium Dioxide (CAS 13463-67-7) | 10 mg/m3 TWA | 15 mg/m3 TWA (total dust)<br>10 mg/m3 TWA (total dust) | - |
| None of the components in this product are listed by IARC, NTP, OSHA or ACGIH as a carcinogen. | | | |

Individual protection measures, such as personal protective equipment:

| | |
|---|---|
| Eye/face protection: | Wear safety glasses with side shields (or goggles) are recommended. |
| Hand protection: | Leather or cotton gloves are recommended. |
| Skin protection: | Loose fitting, long-sleeved shirt and long pants and cap should be worn to protect skin from irritation dust. Construction grade work shoes are recommended. |
| Respiratory protection: | Not required unless used with asphalt or coal tar mastics. In those cases, follow the specific precautions for the material being used. |
| Ventilation: | No special ventilation systems are required when using this product. |
| Thermal hazards: | n/a |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| Physical State: | Solid |
| Appearance: | Various colors and surfaces. Thin black asphaltic roll roofing. |
| Color: | Smooth material is black. Mineral material varies in colors. |
| Odor: | Asphaltic odor |
| pH: | None Established |
| Flash Point: | over 500°F (260°C) |
| Melting point: | 290°F (98.3°C) |
| Freezing point: | None Established |
| Boiling point: | None Established |
| Evaporation rate: | None Established |
| Flammability (solid, gas): | None Established |
| Flammability Limits: | |
| Lower/upper %: | None |
| Explosive Properties: | None Established |
| Oxidizing Properties: | None Established |
| Vapor Pressure: | None Established |
| Vapor Density: | None Established |
| Solubility in Water: | Insoluble |
| Solubility in other solvents | None Established |
| Partition coefficient (n-octanol/water) | None Established |
| Auto-ignition temp: | None Established |
| Decomposition temp: | None Established |
| Kinematic Viscosity: | None Established |
| Dynamic Viscosity: | None Established |
| Softening Point: | None Established |
| Molecular Weight: | None Established |
| VOC Content (%) | None Established |
| Density | None Established |
| Specific gravity: | None Established |

## 10. STABILITY AND REACTIVITY

Chemical Stability
This product is a stable material. This product is not reactive.

Incompatibility
This product will react with strong oxidizing agents, reducing agents, strong acids and alkalis.

Hazardous Decomposition
Decomposition from this material are those that would be expected from any organic (carbon-containing) material. These decomposition products may include oxides of carbon (carbon dioxide, carbon monoxide, carbon particles, and hydrocarbons) are derived from burning.

Hazardous Polymerization
Will not occur.

## 11. TOXICOLOGICAL INFORMATION

Acute Toxicity
Dust from this product is an irritant and may cause irritation or scratchiness of the throat, and/or itching in the eyes and skin.

Information on likely routes of exposure:

| | |
|---|---|
| Product Information: | Toxicological testing has not been conducted for this product overall. Available toxicological data for individual ingredients are summarized below. |
| Eye Contact: | May cause irritation to the eyes. Eye irritation may be treated by flushing eyes with large amounts of water. If irritation persists, seek medical attention. Contact with hot product is abnormal and a possible emergency circumstance because of its adhesive and temperature features, the molten asphalt contact with eyes may cause |

physical eye damage due to adhesive properties as well as thermal burns. Seek medical attention immediately in case of eye contact with molten asphalt contact.

Skin Contact: May cause irritation (itching) to the skin. Skin irritation may be treated by gently washing affected area with soap and warm water. Contact with molten asphalt can result in physical injury/damage and thermal burns. Seek medical attention immediately in case of molten asphalt contact.

Ingestion: This product is not intended to be ingested. If ingested, it may cause irritation of the digestive system.

Inhalation: May cause irritation of the upper respiratory tract. Acute exposure may irritate mucous membranes with tightness in chest, coughing, wheeziness, or congestion. Individuals affected should be moved to fresh air.

| Component | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---|---|---|---|
| Asphalt (at Ambient Temperature) (CAS 8052-42-4) | > 5000 mg/kg (Rat) | > 2000 mg/kg (Rabbit) | - |
| Crystalline Silica (quartz) (CAS 14808-60-7) | > 500 mg/kg (Rat) | - | - |
| Calcium Borate (Colemanite) (CAS 12007-56-6) | > 5600 mg/kg (Rat) | - | - |
| Polyethylene (CAS 9002-88-4) | - | - | 12 g/m³/30M (Mouse) |
| Titanium Dioxide (CAS 13463-67-7) | > 10000 mg/kg (Rat) | - | - |
| * Estimates for product may be based on additional component data not shown. | | | |

Information on toxicological effects:

Symptoms: No information available for this product.

Carcinogenicity: There is no data for this product as a whole.

Carcinogenicity: The table below indicates whether each agency (IARC, NTP, or OSHA) has listed any ingredient as a carcinogen.

**IARC Monographs, Overall Evaluation of Carcinogenicity**

| Component Name | ACGIH | IARC | NTP | OSHA (29 CFR 1910.1001-1050) |
|---|---|---|---|---|
| Asphalt (at Ambient Temperature) (CAS 8052-42-4) | - | 2B | - | - |
| Quartz (CAS 14808-60-7) | A2 | 1 | Known | X |
| Continuous filament glass fibers (CAS 65997-17-3) | A4 | 3 | - | - |
| Polypropylene (CAS 9003-07-0) | - | 3 | - | - |
| Titanium Dioxide (CAS 13463-67-7) | A4 | 2B | - | - |
| Polyethylene (CAS 9002-88-4) | - | 3 | - | - |

Legend

| *ACGIH (American Conference of Governmental Industrial Hygienists)* | | *IARC (International Agency for Research on Cancer)* | |
|---|---|---|---|
| *A1* | *Known Human Carcinogen* | *Group 1* | *Carcinogenic to Humans* |
| *A2* | *Suspected Human Carcinogen* | *Group 2A* | *Probably Carcinogenic to Humans* |
| *A3* | *Animal Carcinogen* | *Group 2B* | *Possibly Carcinogenic to Humans* |
| *A4* | *Not Classified as a Human Carcinogen* | *Group 3* | *Not Classifiable as a Human Carcinogen* |
| | | | |
| *NTP (National Toxicology Program)* | | *OSHA (Occupational Safety and health Administration of the US Department of Labor)* | |
| *Known* | *Known Carcinogen* | *X* | *Present* |
| *Reasonably Anticipated* | *Reasonably Anticipated to be a Human Carcinogen* | | |

Component Information: The statements are provided for informational purposes:

* The IARC Monograph (Vol. 103, 2013, Bitumen and Bitumen Emissions) defines Asphalt as 'Group 2B, Possible Carcinogen to Humans'. This definition is based on studies of exposure to Asphalt fumes at elevated temperatures. The Monograph states that temperature plays an important role in determining the degree of exposure and also the carcinogenic potential of bitumen emissions. This same Monograph states that Asphalt is non-volatile at ambient temperature. There is no data presented in the Monograph to demonstrate that Asphalt at ambient temperature is considered a carcinogen.

* Asphalt (CAS # 8052-42-4 and oxidized asphalt 64742-93-4): The International Agency for Research on Cancer (IARC) has stated that studies of workers exposed to asphalt provide inadequate evidence of carcinogenicity. IARC had previously classified asphalt as a Group 3 substance. Animal studies in which high concentrations of asphalt fumes were breathed for extended periods of time did not indicate any cancer effects. Bronchitis and pneumonitis were observed. Two studies where condensed fractions of certain asphalt fume condensates collected for these studies were repeatedly applied to the skin of laboratory animals reported the induction of skin cancers. The asphalt fume condensates collected for these studies were subjected to extremely high temperatures (601°F/316°C) and were heated for seven to ten hours while being continually stirred. This is not typical of any asphalt application. Trace amounts of polynuclear aromatic

hydrocarbons (PAHs) may be present in some asphalts and can be generated upon excessive heating, which results in thermal cracking of the asphalt compounds. Some of these PAHs have been identified as having potential carcinogenic and reproductive health effects.

* No significant exposure to Crystalline Silica (Quartz) is thought to occur during the use of products in which Crystalline Silica (Quartz) is bound to other materials, such as in paints and coatings. As one reference, see California Office of Health Hazard Assessment at: http://www.oehha.org/prop65/CRNR_notices/safe_use/sylicasud2.html

* The IARC Monograph (Vol 93, 2010, Carbon Black, Titanium Dioxide, Talc) states: "No significant exposure to primary particles of talc is thought to occur during the use of products in which talc is bound to other materials."
* This product contains a small amount of polyaromatic hydrocarbons which have been shown to cause cancer and respiratory damage in laboratory animals. Some asphalts and some asphalt solutions have produced skin cancer in laboratory animals. No association has been established between industrial exposure and cancer. (IRAC*, PART 4, VOLUME 35). Due to size of the particles, minimal exposure to airborne dust is expected.

| | |
|---|---|
| Reproductive toxicity: | Based on available data, the classification criteria are not met. |
| Specific target organ toxicity: | n/a |
| - Single exposure: | n/a |
| - Repeated exposure: | n/a |
| Aspiration hazard: | not classified |
| Chronic effects: | Not expected to be hazardous by OSHA criteria. |
| Further information: | Symptoms may be delayed. |

Numerical measures of toxicity – No information available

## 12. ECOLOGICAL INFORMATION

| | |
|---|---|
| Biodegradation: | Not Established |
| Chemical degradation: | Not Established |
| Bioaccumulation: | Not Established |
| Agility: | Not Established |
| Ecotoxicity influence on Organisms: | Not Established |
| Ecotoxicity in water: | Not Established |
| Other toxicity: | Not Established |

## 13. DISPOSAL CONSIDERATIONS

This product, as supplied, is not regulated as a hazardous waste by the U.S. Environmental Protection Agency (EPA) under Resource Conversation and Recovery Act (RCRA) regulations. Comply with state and local regulations for disposal. If you are unsure of the regulations, contact the local Public Health Department, or the local office of the EPA.

## 14. TRANSPORTATION INFORMATION

Shipping Information
This product is not classified as a hazardous material for transport.

DOT (Ground): N/A
Hazard Class: N/A
DOT Label: N/A
Air: N/A
Water: N/A
Freight Classification: Roofing composition or prepared roofing.

## 15. REGULATORY INFORMATION

US Federal Regulations:
There is no regulation on this product as a whole.

SARA Title III:

None of the products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) or CERCLA (40 CFR 302.4).

State Regulations
A: General Product Information
Other state regulations may apply. Check individual state requirements.
B: Component Analysis - State
The following components appear on one or more of the following state hazardous substances lists:

**US State Regulations:**

| Component | CA | FL | MA | MN | NJ | PA |
|---|---|---|---|---|---|---|
| Asphalt (CAS 8052-42-4) | NO | NO | NO | NO | YES | NO |
| Calcium Carbonate (Limestone) (CAS 1317-65-3) | YES | NO | YES | YES | YES | YES |
| Quartz (CAS 14808-60-7) | YES | NO | YES | YES | YES | YES |
| Continuous filament glass fibers (CAS 65997-17-3) | NO | NO | NO | YES | NO | NO |
| Titanium Dioxide (CAS 13463-67-7) | NO | NO | YES | YES | YES | YES |

**US EPA Label Information**
EPA Pesticide Registration: n/a

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

**WARNING!** This product contains a chemical known to the state of California to cause cancer.
**US. California Proposition 65**
**US - California Proposition 65 - CRT: Carcinogenic substance**
Quartz (CAS 14808-60-7) Listed

**TSCA Status**
This product and its components are listed on the TSCA 8(b) inventory.
None of the components listed in this product are listed on the TSCA Export Notification 12(b) list.

## 16. OTHER

| | | | | |
|---|---|---|---|---|
| NFPA | Health Hazards 1 | Flammability 1 | Instability 0 | Physical and Chemical Properties - |
| HMIS | Health Hazards 1 | Flammability 1 | Physical Hazards 0 | Personal Protection - |
| *Chronic Hazard Star Legend* | | ** = Chronic Health Hazard* | | |

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End of Safety Data Sheet