

MATERIAL SAFETY DATA SHEET

1. PRODUCT and COMPANY IDENTIFICATION

Manufacturer

U.S. PLY, INC.
P.O. BOX 11740
Fort Worth, TX 76110

Non Emergency Information

Telephone: U.S. PLY, INC (877) 628-7759 or (817) 413-0103

Emergency Information

Transportation Emergency Telephone: CHEMTREC 1-800-424-9300. The products listed below are registered by the manufacturer, U.S. PLY, INC.

Product Name: USP APP 160S, USP APP 160M, DURAWELD APP BASE, DURAWELD 4S APP, DURAWELD 5S APP, DURAWELD 4M APP, DURAWELD 4MFR APP, SAFEWELD APP BASE, SAFEWELD X4S APP, SAFEWELD X4M APP, SAFEWELD X4FR APP, SAFEWELD 180S APP, SAFEWELD 180M APP, SAFEWELD 180FR APP

Chemical Name: Asphalt Mixture/Roll Roofing

2. COMPOSITION (Information on Ingredients)		
Component	CAS No	Weight %
Chemical Name (common names)		
Asphalt	8052-42-4	40-60
Crystalline Silica (Sand)	14808-60-7	1-5
Talc	14807-96-6	1-4
Non-Hazardous Ingredients	N/A	36-49
See Section 8 of this MSDS for Exposure Guidelines		

3. HAZARDS IDENTIFICATION

Physical Hazards

APPEARANCE AND ODOR: Black sheet in roll form. Surfaces may include roofing granules, slate, sand, talc or film. Slight asphaltic odor.

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

Inhalation of dust from the product may cause temporary irritation and/or congestion. Individuals affected should be moved to fresh air.

Skin irritation may be treated by gently washing affected area with soap and warm water.

Eye irritation may be treated by flushing eyes with large amounts of water. If irritation persists, seek medical attention.

Potential Health Effects

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.

Exposure Routes

Primary: Inhalation (breathing dust), skin contact and eye contact.

Inhalation: Irritation of the upper respiratory tract may occur. Acute exposure may irritate mucous membranes with tightness in chest, coughing, wheeziness, or congestion.

Chronic exposure to silica may cause limitation of expansion of the chest, emphysema. Chronic exposure to talc may cause cough, pneumoconiosis.

Skin Contact: Temporary irritation (itching) or redness may occur. Contact with molten asphalt can result in burns.

Absorption: Not applicable

Eye Contact: May irritate eyes. Because of its adhesive and temperature features, the molten asphalt contact with eyes may cause physical damage due to adhesive properties as well as burns.

Ingestion: May cause irritation of the digestive system.

Medical Conditions Aggravated by Exposure

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

4. FIRST AID MEASURES

- 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. 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. Bath 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. In case of ingestion seek medical attention immediately.

5. FIRE FIGHTING MEASURES

Flash Point: 570°F (+200°C) Asphalt Blend Portion
 Flammable Limits:
 Lower Explosive Limit N/A
 Upper Explosive Limit N/A
 Auto Ignition: N/A

Extinguishing Media: Foam, CO2, dry chemical or water spray

Special Fire-fighting Procedures: Wear self-contained breathing apparatus (SCBA) and full protective clothing.

Unusual Fire and Explosive Hazards: None

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: Keep away from heat, sparks or open flame. 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 (°C to °C). Protect from freezing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Read all product instructions before using. Personal protective equipment should include safety eye wear, fire resistant gloves, and long sleeve work clothes to prevent excessive skin contact. No special ventilation systems are required under normal conditions of use in well ventilated areas.

Exposure Guidelines	OSHA	ACGIH
Crystalline Silica (containing no asbestos) 14808-60-7	Respirable Dust: 0.1 mg/m ³ TWA	Respirable Fraction: 0.01 mg/m ³ TWA
Talc (14807-96-6)	Respirable Dust: (Less than 1% crystalline silica): 2 mg/m ³ TWA ('Silicates')	Respirable fraction: 2mg/m ³ TWA (Particulate matter containing no asbestos and <1% crystalline)

None of the components in this product are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

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
Specific Gravity:	Approximately 1.2 – 1.6 (H2O = 1)
Boiling Point:	over 600°F (°C)
Flash Point:	over 570°F (°C)
Melting Point:	over 250°F (°C)
Self-Flammability:	None Established
Auto-Flammability:	None Established
pH:	N/A
Vapor Pressure:	N/A
Solubility in Water:	Not soluble
Explosion data:	N/A
VOC:	N/A

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

Oxides of carbon (carbon monoxide, carbon dioxide, 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.

Carcinogenicity

There is no data for this product as a whole.

Component Carcinogenicity

Crystalline Silica (14808-60-7)	ACGIH: A2 – Suspected Human Carcinogen NTP: Known Carcinogen (Select Carcinogen) IARC: Monograph 68, 1997; (inhaled in the form of quartz or cristobalite from occupational sources) (Group 1 carcinogenic to humans)
Talc (14807-96-6)	ACGIH: A4 – Not Classifiable as a Human Carcinogen IARC: Supplement 7, 1987; Monograph 42, 1987 (Group 3 not classifiable)

Additional toxicological Information

This material is in a solid form; therefore, exposures to hazardous dusts or fumes are not expected to occur. Exposure limits are given for reference only.

Asphalt: 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.

Crystalline Silica: The International Agency for Research on Cancer (IARC) has classified crystalline silica as a Group 1 substance, carcinogenic to humans. This classification is based on the findings of laboratory animal studies (inhalation and implantation) and epidemiology studies that were considered sufficient for carcinogenicity. Several studies have been conducted to determine the risk of cancer to workers exposed to dusts which contain crystalline silica. However, these studies did not consider other factors or elements that workers may be exposed to. Therefore, the causes of the excess deaths due to cancer could not be precisely determined. Further studies are being conducted to determine the risk of cancer when working with crystalline silica products. Excessive exposure to crystalline silica can cause silicosis, a non-cancerous lung disease.

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 Conservation 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 this 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).

16. OTHER

NFPA: Fire 1; Health 1; Reactivity 0
HMIS: Flammability 1; Health 1; Reactivity 0

Prepared by:
U.S. PLY, INC. Technical Services Department
2000 E. Richmond Ave.
Fort Worth, TX USA 76104

The information and recommendations contained herein are presented in good faith and believed to be correct as of the date hereof. The manufacturer makes no representations as to the completeness or accuracy thereof. Information supplied upon the condition that the persons receiving said information will make their own determination as to its suitability for their particular purpose prior to use. In no event will the manufacturer be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. No representations or warranties, either expressed or implied, including the merchantability or fitness for a particular purpose are made herein with respect to this information or the product to which information refers.

Information contained herein is deemed to be reliable, conservative and accurate. U.S. PLY, Inc. reserves the right to change the design, specification or any other features at any time, without notice, while otherwise maintaining regulatory compliance.

Issue Date: 10/31/05

Revised Date: 2/22/06 Revision Disclosure: Change of Address

MATERIAL SAFETY DATA SHEET

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Manufacturer
 U.S. PLY, INC.
 P.O. Box 11740
 Fort Worth, TX 76110

Non Emergency Information
 Telephone: U.S. PLY, INC. (866) 787-4759 or (817) 413-0103

Emergency Information
 Transportation Emergency Telephone: 1-800-424-9300.

Product Name: DURAFLEX 30 SBS BASE, DURAFLEX 60 SBS BASE, DURAFLEX SBS POLY BASE, DURAFLEX SEBS POLY BASE, DURAFLEX 190S SBS, DURAFLEX G4S SBS, DURAFLEX 190 SBS, DURAFLEX G4M SBS, DURAFLEX 190FR SBS, DURAFLEX G4FR SBS, DURAFLEX 250FR SBS, DURAFLEX DUAL CAP FR SBS, DURAFLEX 60TG SBS BASE, DURAFLEX 90TG SBS BASE, DURAFLEX 90HTTG SBS BASE, DURAFLEX X4S TG SBS BASE, DURAFLEX 4HTS TG SBS BASE, DURAFLEX 190S TG SBS, DURAFLEX 190TG SBS, DURAFLEX 190FR TG SBS, DURAFLEX X4M TG SBS, DURAFLEX 4MHT TG SBS, DURAFLEX X4FR TG SBS, DURAFLEX G4FR TG SBS, DURAFLEX 4MFRHT TG SBS, DURAFLEX ALUM, DURAFLEX COPPER, DURAFLEX COLOR SBS, DURASTAR WH SBS, DURASTAR ALM SBS, DURASTAR WH-TG SBS, DURASTAR ALM-TG SBS, RAPIDGRIP READI-BASE, RAPIDGRIP SR-200, RAPIDGRIP SBS SA CAP, RAPIDGRIP SBS SA FR CAP, RAPIDGRIP SBS UNDERLAYMENT, RAPIDGRIP HT METAL UNDERLAYMENT, USP SBS 160M

Chemical Name: Asphalt Mixture/Roll Roofing

2. COMPOSITION (Information on Ingredients)

Component	CAS No	Weight %
Chemical Name (common names)		
Asphalt	8052-42-4	55 - 85
Calcium Carbonate	1317-65-3	12 - 30
Crystalline Silica (Sand)	14808-60-7	1 - 5
Talc	14807-96-6	0 - 1
Non-Hazardous Ingredients	N/A	12 - 32
See Section 8 of this MSDS for Exposure Guidelines		

3. HAZARDS IDENTIFICATION

Physical Hazards
APPEARANCE AND ODOR: Black sheet in roll form. Surfaces may include roofing granules, slate, sand, talc or film. Slight asphaltic odor.

Under normal use conditions, this product is not expected to create any unusual emergency hazards.
 Inhalation of dust from the product may cause temporary irritation and/or congestion. Individuals affected should be moved to fresh air.
 Skin irritation may be treated by gently washing affected area with soap and warm water.
 Eye irritation may be treated by flushing eyes with large amounts of water. If irritation persists, seek medical attention.

Potential Health Effects
 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.

Exposure Routes
 Primary: Inhalation (breathing dust), skin contact and eye contact.

Inhalation: Irritation of the upper respiratory tract may occur. Acute exposure may irritate mucous membranes with tightness in chest, coughing, wheeziness, or congestion.
 Chronic exposure to silica may cause limitation of expansion of the chest, emphysema. Chronic exposure to talc may cause cough, pneumoconiosis.

Skin Contact: Temporary irritation (itching) or redness may occur. Contact with molten asphalt can result in burns.

Absorption: Not applicable

Eye Contact: May irritate eyes. Because of its adhesive and temperature features, the molten asphalt contact with eyes may cause physical damage due to adhesive properties as well as burns.

Ingestion: May cause irritation of the digestive system.

Medical Conditions Aggravated by Exposure

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

4. FIRST AID MEASURES

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. 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. In case of ingestion seek medical attention immediately.

5. FIRE FIGHTING MEASURES

Flash Point: 570°F (299°C) Asphalt Blend Portion

Flammable Limits:

Lower Explosive Limit N/A

Upper Explosive Limit N/A

Auto Ignition: N/A

Extinguishing Media: Foam, CO2, dry chemical or water spray

Special Fire-fighting Procedures: Wear self-contained breathing apparatus (SCBA) and full protective clothing.

Unusual Fire and Explosive Hazards: None

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 Conservation 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: Keep away from heat, sparks or open flame. 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). Protect from freezing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Read all product instructions before using. Personal protective equipment should include safety eye wear, fire resistant gloves, and long sleeve work clothes to prevent excessive skin contact. No special ventilation systems are required under normal conditions of use in well ventilated areas.

Exposure Guidelines	OSHA	ACGIH
Calcium Carbonate (1317-65-3)	Total Dust: 15 mg/m ³ TWA Respirable Dust: 5 mg/m ³ TWA	Total Dust: 10 mg/m ³ TWA Respirable Dust: 5 mg/m ³ TWA
Crystalline Silica (containing no asbestos) 14808-60-7	Respirable Dust: 0.1 mg/m ³ TWA	Respirable Fraction: 0.1 mg/m ³ TWA
Talc (containing no asbestos) 14807-96-6	Respirable Dust: (Less than 1% crystalline silica) 2 mg/m ³ TWA ('Silicates')	2 mg/m ³ TWA (Particulate matter containing no asbestos and <1% crystalline)

None of the components in this product are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

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
 Specific Gravity: Approximately 1.2 – 1.6 (H2O = 1)
 Boiling Point: over 600°F (315°C)
 Flash Point: over 570°F (299°C)
 Melting Point: over 250°F (121°C)
 Self-Flammability: None Established
 Auto-Flammability: None Established
 pH: N/A
 Vapor Pressure: N/A
 Solubility in Water: Not soluble
 Explosion data: N/A
 VOC: N/A

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

Oxides of carbon (carbon monoxide, carbon dioxide, 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.

Carcinogenicity

There is no data for this product as a whole.

Component Carcinogenicity

Crystalline Silica (14808-60-7) ACGIH: A2 – Suspected Human Carcinogen
 IARC: Group 1 – Carcinogen to Humans (IARC Monograph 68, 1997, inhaled in the form of quartz or cristobalite from occupational sources)

Talc (14807-96-6) ACGIH: A4 – Not Classifiable as a Human Carcinogen
 IARC: Supplement 7, 1987; Monograph 42, 1987 (Group 3 not classifiable)

Additional toxicological Information

This material is in a solid form; therefore, exposures to hazardous dusts or fumes are not expected to occur. Exposure limits are given for reference only.

Asphalt: 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.

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 Conservation 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).

16. OTHER

NFPA: Fire 1; Health 1; Reactivity 0
HMIS: Flammability 1; Health 1; Reactivity 0

Prepared by:
U.S. PLY, INC. Technical Services Department
P.O. Box 11740
Fort Worth, TX USA 76110

The information and recommendations contained herein are presented in good faith and believed to be correct as of the date hereof. The manufacturer makes no representations as to the completeness or accuracy thereof. Information supplied upon the condition that the persons receiving said information will make their own determination as to its suitability for their particular purpose prior to use. In no event will the manufacturer be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. No representations or warranties, either expressed or implied, including the merchantability or fitness for a particular purpose are made herein with respect to this information or the product to which information refers.

Information contained herein is deemed to be reliable, conservative and accurate. U.S. PLY, Inc. reserves the right to change the design, specification or any other features at any time, without notice, while otherwise maintaining regulatory compliance.

Issue Date: 9/24/04

Revised Date: 2/22/06 Revision Disclosure: Addition of new products. Change of Address.

MATERIAL SAFETY DATA SHEET

1. PRODUCT and COMPANY IDENTIFICATION

Manufacturer
 U.S. PLY, INC.
 P.O. Box 11740
 Fort Worth, TX 76110

Non Emergency Information
 Telephone: U.S. PLY, INC. (866) 787-4759 or (817) 413-0103

Emergency Information
 Transportation Emergency Telephone: 1-800-424-9300.

Product Name: USP #41 ASPHALT PRIMER, USP #330 SBS MODIFIED BITUMEN ADHESIVE, USP #333 MODIFIED FLASHING CEMENT, USP #640 ASBESTOS FREE PLASTIC ROOF CEMENT, USP #643 ASBESTOS FREE FLASHING CEMENT, USP INSULATION ADHESIVE, DURAFLEX #901 PREMIUM SBS MODIFIED ADHESIVE, DURAFLEX #954 PREMIUM SBS MODIFIED FLASHING CEMENT, SAFEWELD APP MODIFIED ADHESIVE, SAFEWELD APP MODIFIED FLASHING CEMENT

Chemical Name: Hydrocarbon Mixture

2. COMPOSITION (Information on Ingredients)

Component	CAS No	Weight %
Chemical Name (common names)		
Asphalt, oxidized	8052-42-4	40 – 60
Stoddard solvent (mineral spirits)	8052-41-3	0 – 60*
Volatile Petroleum Solvents	8030-30-6	0 – 60**
Calcium Carbonate	1317-65-3	0 – 25
Cellulosic Fibers	65996-61-4	0 – 7
Hydrated Aluminum – Magnesium Silicate	12174-11-7	0 – 6***
Amine Salt	28701-67-9	0 – 2****
Non-Hazardous Ingredients	N/A	4 – 15
See Section 8 of this MSDS for Exposure Guidelines		

Additional Component Information

- * Component of DURAFLEX Adhesives & Flashing Cements, USP Insulation Adhesive, SAFEWELD Adhesive & Flashing Cements.
- ** Component of USP #41 Asphalt Primer, USP #330 SBS Modified Adhesive, USP #333 SBS Modified Flashing Cement, USP #640 Asbestos Free Plastic Roof Cement, USP #643 Asbestos Free Flashing Cement.
- *** Component of USP #640 Asbestos Free Plastic Roof Cement, USP #643 Asbestos Free Flashing Cement.
- **** Component of USP #41 Asphalt Primer, USP #330 SBS Modified Adhesive, USP #333 SBS Modified Flashing Cement, USP #640 Asbestos Free Plastic Roof Cement, USP #643 Asbestos Free Flashing Cement, DuraFlex 901 Premium SBS Modified Adhesive, DuraFlex #954 Premium SBS Modified Flashing Cement, SafeWeld APP Modified Adhesive, SafeWeld APP Modified Flashing Cement.

3. HAZARDS IDENTIFICATION

Physical Hazards
APPEARANCE AND ODOR: Black semi liquid or mastic. Slight asphaltic odor.

Combustible liquid. Remove sources of ignition.

Inhalation of fumes may cause headache, drowsiness, nausea, and upper respiratory irritation. Individuals affected should be moved to fresh air. Skin irritation may be treated by gently washing affected area with soap and warm water. Eye irritation may be treated by flushing eyes with large amounts of water. If irritation persists, seek medical attention.

Potential Health Effects
 Prolonged and excessive exposures to solvent fumes can result in nausea and dizziness and central nervous system damage. Asphalt and its fumes can irritate skin, eyes, and upper respiratory tract.

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.

Exposure Routes

Primary: Inhalation (breathing fumes), skin contact and eye contact.

Inhalation: Asphalt fumes: Irritation of the upper respiratory tract may occur. Acute exposure may irritate mucous membranes with tightness in chest, coughing, wheezing, or congestion.

Solvent fumes: Prolonged and excessive exposures to solvent fumes may result in nausea, dizziness and central nervous system damage.

Skin Contact: Temporary irritation (itching) or redness may occur. Drying of skin or defatting effect.

Absorption: Not applicable

Eye Contact: May irritate eyes. Because of its adhesive features, the asphalt contact with eyes may cause physical damage due to adhesive properties as well as severe irritation and pain.

Ingestion: Ingestion of this product is not likely to occur under normal conditions of use. No information available.

Medical Conditions Aggravated by Exposure

Exposure to fumes may aggravate pre-existing upper respiratory, skin, eye and CNS (central nervous system) and lung diseases or conditions.

4. FIRST AID MEASURES

Inhalation: If breathing difficulty is experienced, move to a fresh air place. If difficulty persists, seek medical attention.

Skin Contact: Wash gently with soap and warm 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. Bathe eye immediately with a large amount of water for at least 15 minutes. Seek medical attention immediately.

Ingestion: This product is not intended to be ingested. In case of ingestion seek medical attention immediately.

Note: This product is not intended to be ingested. Do not induce vomiting. In case of ingestion seek medical attention immediately.

5. FIRE FIGHTING MEASURES

Flash Point: 105°F – 110°F (40.5 - 43°C)

Flammable Limits:

Lower Explosive Limit 0.9

Upper Explosive Limit 6

Auto Ignition: N/A

Flammability Classification: Combustible

Rate of Burning: Not Established

Extinguishing Media: Foam, CO₂, dry chemical.

Special Fire-fighting Procedures: Wear self-contained breathing apparatus (SCBA) and full protective clothing.

NFPA Ratings for Health – Flammability – Reactivity are: 1 – 2 – 1. Protective Equipment: B

6. ACCIDENTAL RELEASE MEASURES

Environmental Precautions: Remove all sources of ignition. Evacuate and ventilate spill area. Dam spill area with sand, earth or other suitable absorbent. Prevent entry of material into sewers, or other water sources, or land areas. Wear full protective clothing and respiratory protection during clean-up as required to maintain exposures below the applicable exposure limit. Shovel absorbed material into containers in well-ventilated area.

Clean-up Methods: This product, as supplied, is not regulated as a hazardous waste by the U.S. Environmental Protection Agency (EPA) under Resource Conservation 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: Keep away from heat, sparks, pilot lights, static electricity and open flame. Containers exposed to elevated temperatures may develop pressure build-up and rupture. Recommended storage temperature is between 55°F to 95°F (12.7°C to 35°C). Protect from freezing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Read all product instructions before using. Personal protective equipment should include safety eye wear, fire resistant gloves, and long sleeve work clothes to prevent excessive skin contact. No special ventilation systems are required under normal conditions of use in well ventilated areas.

Exposure Guidelines	OSHA	ACGIH
Stoddard Solvent (mineral spirits) 8052-41-3	100 ppm TWA 525 mg/m ³ TWA	100 ppm TWA
Volatile Petroleum Solvents 8030-30-6	100 ppm TWA 400 mg/m ³ TWA	100 ppm TWA 400 mg/m ³ TWA
Calcium Carbonate (1317-65-3)	Total Dust 15 mg/m ³ TWA Respirable Dust: 5 mg/m ³	Total Dust 10 mg/m ³ TWA Respirable Dust: 5 mg/m ³

None of the components in this product are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Thin to Thick Liquid
 Appearance: Black Liquid
 Color: Black
 Odor: Asphaltic odor/solvent odor
 Specific Gravity: Approximately 0.9 – 1.3 (H2O = 1)
 Boiling Point: Over 310°F – 400°F (154°C – 204°C)
 Flash Point: Over 105°F – 110°F (40.5°C – 43°C)
 Melting Point: N/A
 Self-Flammability: None Established
 Auto-Flammability: None Established
 pH: N/A
 Vapor Pressure: 0.8 – 4.6 mm Hg (68°F/20°C)
 Vapor Density: >1
 Solubility in Water: Not soluble
 Explosion data: N/A
 VOC: 250 – 500 g/L (see below)

Additional VOC Information:

USP #41 Asphalt Primer 500 g/L
 USP #330 SBS Modified Adhesive 300 g/L
 USP #333 SBS Modified Flashing Cement 300 g/L
 USP #640 Asbestos Free Plastic Roof Cement 300 g/L
 USP #643 Asbestos Free Flashing Cement 300 g/L
 USP Insulation Adhesive 300 g/L
 DuraFlex #901 Premium SBS Modified Adhesive <300 g/L
 DuraFlex #954 Premium SBS Modified Flashing Cement <300 g/L
 SafeWeld APP Modified Adhesive <200 g/L
 SafeWeld APP Modified Flashing Cement <200 g/L

10. STABILITY AND REACTIVITY

Chemical Stability

This product is a stable material..

Incompatibility

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

Hazardous Decomposition

Oxides of carbon (carbon monoxide, carbon dioxide, 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.

Carcinogenicity

There is no data for this product as a whole.

Component Carcinogenicity

There is no data for components of this product.

Additional toxicological Information

Solvents: Moderate irritation of skin, eyes, and upper respiratory tract on prolonged, repeated contact. Dermatitis and defatting of the skin. Pre-existing eye, skin, and pulmonary disorders may be aggravated by exposure to this product. Reports have associated permanent brain and nervous system damage with prolonged (>12-14 yr) occupational overexposure to high levels of solvents.

Asphalt: 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.

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 Conservation and Recovery Act (RCRA) regulations. Comply with state and local regulations for disposal. Empty containers must be handled with care due to product residue. Decontaminate empty containers prior to disposal. If you are unsure of the regulations, contact the local Public Health Department, or the local office of the EPA.

14. TRANSPORTATION INFORMATIONShipping Information

This product is classified as a combustible liquid, N.O.S. (Asphalt).

UN/NA:	NA1993
Packing Group:	III
DOT (Ground):	N/A
Hazard Class:	Combustible Liquid
DOT Label:	N/A
Water:	Adhesives, containing a flammable liquid – Division 3

Freight Classification: Flammable Liquid – Division 3

15. REGULATORY INFORMATIONUS Federal Regulations:

The following designations apply to this product:

SARA Title III:

Immediate (acute) health hazard. Delayed (chronic) health hazard. Fire hazard. 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).

16. OTHER

NFPA: Fire 1; Health 2; Reactivity 1
HMIS: Flammability 1; Health 2; Reactivity 1

Prepared by:
U.S. PLY, INC. Technical Services Department

P.O. Box11740
Fort Worth, TX USA 76110

The information and recommendations contained herein are presented in good faith and believed to be correct as of the date hereof. The manufacturer makes no representations as to the completeness or accuracy thereof. Information supplied upon the condition that the persons receiving said information will make their own determination as to its suitability for their particular purpose prior to use. In no event will the manufacturer be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. No representations or warranties, either expressed or implied, including the merchantability or fitness for a particular purpose are made herein with respect to this information or the product to which information refers.

Information contained herein is deemed to be reliable, conservative and accurate. U.S. PLY, Inc. reserves the right to change the design, specification or any other features at any time, without notice, while otherwise maintaining regulatory compliance.

Issue Date: 9/24/04

Revised Date: 2/22/06 Revision Disclosure: Change of Address

MATERIAL SAFETY DATA SHEET

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

Manufacturer

U.S. PLY, INC.
P.O. Box 11740
Fort Worth, TX 76104

Non-Emergency Information

Telephone: U.S. PLY, INC. (866) 787-4759 or (817) 413-0103

Emergency Information

Transportation Emergency Telephone: 1-800-424-9300

Product Name: USP BLEEDBLOCK, USP ENERGYBASE, USP ENERGYSIL SP-BASE COAT, USP ENERGYBRITE, USP ENERGYKOTE, USP ENERGYMAX

Product Use: Acrylic Roof Coating

SECTION 2 – COMPOSITION (INFORMATION OF INGREDIENTS)

Reportable Components	CAS Number	Weight Percent (+/-2%)
Calcium Carbonate	471-34-1	19-36
Titanium Dioxide	13463-67-7	7-9

SECTION 3 – HAZARDS IDENTIFICATION

Physical Hazards:

APPEARANCE AND ODOR: White or light grey viscous liquid.

No severe or acute health hazards are known to be associated with the use of this product. Avoid inhalation of heated vapors or spray mists. Common irritation symptoms-headache, nausea, nose and throat irritation-may result from overexposure.

Potential Health Effects:

May aggravate pre-existing respiratory and skin disorders.

Exposure Routes:

Primary: Inhalation, skin contact and eye contact.

- Inhalation: Short-term inhalation toxicity is low. Breathing small amounts during normal handling is not likely to cause harmful effects. Breathing large amounts may cause overexposure symptoms, such as headache, nausea, and irritation of nose and throat.
- Skin Contact: Exposure causes skin irritation. Prolonged or repeated exposure may dry the skin. Symptoms may include redness, burning, drying and cracking.
- Absorption: Skin absorption is possible, but harmful effects are not expected from this route of exposure under normal conditions of handling and use.
- Eye Contact: Exposure to liquid or vapor causes eye irritation. Symptoms may include stinging, tearing, redness and swelling.
- Ingestion: Swallowing small amounts of this product during normal use. It is not likely to cause any adverse health effects. Ingestion of larger amounts can result in corrosive action in the mouth, stomach tissue and digestive tract. Symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea.

Read the entire MSDS for a more thorough assessment to the hazard information on this product.

SECTION 4 – FIRST AID MEASURES

- General: In case of accident or if you feel unwell, seek medical advice IMMEDIATELY. (Show the product label where possible)
- Inhalation: Remove victim from exposure to well ventilated area. If breathing is labored, qualified personnel should administer oxygen. Apply artificial respiration if breathing has ceased or shows signs of failing.
- Skin Contact: Remove contaminated clothing. Immediately wash affected areas thoroughly with soap and water. If irritation, redness, or a burning sensation develops and persists, obtain medical advice. Contaminated clothing should be thoroughly cleaned before reuse.
- Eye Contact: Immediately flush eyes running water for a minimum of 15 minutes. Hold eyelids open during flushing. If irritation persists, repeat flushing. Obtain medical attention IMMEDIATELY.
- Ingestion: Do NOT induce vomiting. Provided the patient is conscious, wash out mouth with water then give 1 or 2 glasses of water to drink. Refer person to medical personnel for immediate attention.

Note to Physicians: Symptomatic and supportive therapy as needed. Following severe exposure medical follow-up should be monitored for at least 48 hours.

SECTION 5 – FIRE-FIGHTING MEASURES

Flash Point: N/A

Flammable Limits In Air by Volume:

USP BleedBlock	= (Lower): N/A	(Upper): N/A
USP EnergyBase	= (Lower): N/A	(Upper): N/A
USP EnergySil SP-Base	= (Lower): N/A	(Upper): N/A
USP EnergyBrite	= (Lower): N/A	(Upper): N/A
USP EnergyCoat	= (Lower): N/A	(Upper): N/A
USP EnergyMax	= (Lower): N/A	(Upper): N/A

Extinguishing Media: Use foam, dry chemical, CO₂, or water.

Fire Fighting Procedures: As appropriate for surrounding materials/equipment. If electrical equipment is involved, the use of foam should be avoided. No unusual fire or explosion hazards.

Fire Fighting Protective Equipment: Wear self-contained breathing apparatus with a full-face piece operated in the positive pressure demand mode when fighting fires.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

For major spills call CHEMTREC (800-424-9300).

Spills, Leaks, or Releases: Remove all sources of ignition. Ventilate area. Absorb spill with an absorbent material such as sawdust, vermiculite or sand, and place in a closed container. In case of large spill, dike the area to prevent this material from entering water systems or sewers.

SECTION 7 – HANDLING AND STORAGE

Handling: Avoid breathing aerosols, mists and vapors. Avoid prolonged or repeated skin contact (See Section 8—Exposure Control for details)

Storage Requirements: Keep containers properly sealed and when stored indoors, in a well-ventilated area.

Storage Temperature: Avoid storage above 100°F. **Do not freeze.**

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Read all product instructions before using. Personal protective equipment should include safety eye wear, fire resistant gloves, and long sleeve work clothes to prevent excessive skin contact. No special ventilation systems are required under normal conditions of use in well ventilated areas.

Exposure Guidelines	OSHA	ACGIH
Calcium Carbonate (471-34-1)	Total Dust 15 mg/m ³ TWA Respirable Dust: 5 mg/m ³	Total Dust 10 mg/m ³ TWA Respirable Dust: 5 mg/m ³
Titanium Dioxide (13463-67-7)	Total Dust 10 mg/m ³ TWA Respirable Dust: 5 mg/m ³	Total Dust 10 mg/m ³ TWA Respirable Dust: 5 mg/m ³

None of the components in this product are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

PREVENTATIVE MEASURES:

Conditions of use, adequacy of engineering or other control measures, and actual exposures will dictate the need for specific protective devices at your workplace.

Work/Hygienic Practices: Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet facilities. Promptly remove soiled clothing and wash thoroughly before reuse. Shower after work, using plenty of soap and water. Open containers of food and beverage should be kept away from areas where the product is used or stored. Eating, drinking, smoking and application of cosmetics should be prohibited in areas where the product is being used.

Engineering Controls: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s). General ventilation is recommended. Additional local exhaust ventilation is recommended where vapors, mists, or aerosols may be released. For guidance on engineering control measures refer to publications such as the ACGIH current edition of "Industrial Ventilation, a manual of Recommended Practice."

PERSONAL PROTECTIVE EQUIPMENT:

Eye Protection: Chemical splash goggles in compliance with OSHA regulations are advised. However, OSHA regulations also permit other types of safety glasses. (Consult your safety equipment supplier)

Skin Protection: Wear protective clothing to prevent skin contact. Keep exposed skin area to a minimum. Protective clothing should be selected and used in accordance with "Guidelines for the Selection of Chemical Protective Clothing" published by ACGIH. Eye wash station and safety shower should be available.

Respiratory Protection: This product has demonstrated no observable effects at room temperature; however, it is highly recommended that an air-purifying respirator with organic filter cartridges be worn. In addition, in any interior, confined space, spray application, a supplied air source must be provided. When the product is sprayed or heated without adequate ventilation, an approved MSHA/NIOSH positive-pressure, supplied-air respirator may be required. Air purifying respirators equipped with organic vapor cartridges and a Hepa (P100) particulate filter may be used under certain conditions when a cartridge change-out schedule has been developed in accordance with the OSHA preparatory protection standard (29 CFR. 1910.134).

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in the work area.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Viscous liquid
 Flash Point: N/A
 Vapor Density (Air=1): Heavier than air
 Boiling Point: 212°F - 213°F (100°C)
 Solubility (Water): Soluble
 VOC: < 50 grams / liter
 Specific Gravity: USP BleedBlock = 1.38; USP EnergyBase = 1.42; USP EnergySil SP-Base = 1.26; USP EnergyBrite = 1.44; USP EnergyKote = 1.42; USP EnergyMax = 1.30

Evaporation Rate: Slower than Ether
pH: 8.5 – 9.0

SECTION 10 – STABILITY AND REACTIVITY

Hazardous Decomposition Products:

By fire: Carbon Dioxide, Carbon Monoxide.

Chemical Stability:

Stable at room temperature.

Conditions to Avoid:

Avoid freezing.

Incompatibility:

None Known

Hazardous Polymerization:

Will not occur

SECTION 11 – TOXICOLOGICAL INFORMATION

Potential Health Effects: May aggravate pre-existing respiratory and skin disorders.

Calcium Carbonate: Cas No. 471-34-1: LC50 Rat 4HR; LD50 Rat

Titanium Dioxide: Cas No. 13463-67-1: LC50 Rat 4HR; LD50 Rat

Inhalation: Short-term inhalation toxicity is low. Breathing small amounts during normal handling is not likely to cause harmful effects. Breathing large amounts may cause overexposure symptoms, such as headache, nausea, and irritation of nose and throat.

Skin Contact: Exposure causes skin irritation. Prolonged or repeated exposure may dry the skin. Symptoms may include redness, burning, drying and cracking. Skin adsorption is possible, but harmful effects are not expected from this route of exposure under normal conditions of handling and use.

Eye Contact: Exposure to liquid or vapor causes eye irritation. Symptoms may include stinging, tearing, redness and swelling.

Ingestion: Swallowing small amounts of this product during normal use, is not likely to cause any adverse health effects. Ingestion of larger amounts can result in corrosive action in the mouth, stomach tissue and digestive tract. Symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea.

Carcinogenicity: The ingredients of this product are not classified as carcinogenic by ACGIH or IARC, not regulated as carcinogens by OSHA, and not listed as carcinogens by NTP.

SECTION 12 – ECOLOGICAL INFORMATION

No data available

SECTION 13 – DISPOSAL CONSIDERATIONS

Liquid waste must be disposed of in accordance with Federal, State and local regulations. Incineration is the preferred method. In its cured (solid) form, this product is considered non-hazardous, and can usually be land filled. For further information contact your state or local solid waste agency or the United States Environmental Protection Agency's RCRA Hotline (1-800-434-9300). Chemical waste, even small quantities should never be poured down drains, sewers or waterways. Empty containers should be decontaminated and either passed to an approved drum recycler or destroyed.

SECTION 14 – TRANSPORT INFORMATION

DOT: Not Regulated

Transportation Emergency Telephone Number: 1-800-424-9300 (CHEMTREC)

SECTION 15 – OTHER INFORMATION

TSCA (Toxic Substances Control Act) Regulations: This material or its components are listed on the TSCA Chemical Substance Inventory and is in compliance with all applicable rules and orders. One or more of the components may be exempt from listing on the TSCA Inventory.

NFPA: Health 1; Flammability 0; Reactivity 0

HMIS: Health 1; Flammability 0; Reactivity 0; Protection X

MATERIAL SAFETY DATA SHEET

1. PRODUCT and COMPANY IDENTIFICATION

Manufacturer

U.S. PLY, INC.
 P.O. Box 11740
 Fort Worth, TX 76110

Non Emergency Information

Telephone: U.S. PLY, INC. (866) 787-4759 or (817) 413-0103

Emergency Information

Transportation Emergency Telephone: 1-800-424-9300.

Product Name: DURAFLEX 30 SBS BASE, DURAFLEX 60 SBS BASE, DURAFLEX SBS POLYBASE, DURAFLEX SEBS POLYBASE, DURAFLEX 190S SBS, DURAFLEX G4S SBS, DURAFLEX 190 SBS, DURAFLEX G4M SBS, DURAFLEX 190FR SBS, DURAFLEX G4FR SBS, DURAFLEX 250S SBS BASE, DURAFLEX 250 SBS, DURAFLEX 250FR SBS, DURAFLEX DUAL CAP FR SBS, DURAFLEX 60TG SBS BASE, DURAFLEX 90TG SBS BASE, DURAFLEX 90HTTG SBS BASE, DURAFLEX X4S TG SBS BASE, DURAFLEX 4HTS TG SBS BASE, DURAFLEX 190S TG SBS, DURAFLEX 190TG SBS, DURAFLEX 190FR TG SBS, DURAFLEX X4M TG SBS, DURAFLEX 4MHT TG SBS, DURAFLEX X4FR TG SBS, DURAFLEX G4FR TG SBS, DURAFLEX 4MFRHT TG SBS, DURAFLEX ALUM, DURAFLEX COPPER, DURAFLEX COLOR SBS, DURASTAR WH SBS, DURASTAR ALM SBS, DURASTAR WH-TG SBS, DURASTAR ALM-TG SBS, RAPIDGRIP READI-BASE, RAPIDGRIP SR-200, RAPIDGRIP SBS SA CAP, RAPIDGRIP SBS SA FR CAP, RAPIDGRIP SBS UNDERLAYMENT, RAPIDGRIP HT METAL UNDERLAYMENT, USP SBS 160M, USP SBS WALKBOARD

Chemical Name: Asphalt Mixture/Roll Roofing

2. COMPOSITION (Information on Ingredients)

Component	CAS No	Weight %
Chemical Name (common names)		
Asphalt	8052-42-4	55 - 85
Calcium Carbonate	1317-65-3	12 - 30
Crystalline Silica (Sand)	14808-60-7	1 - 5
Talc	14807-96-6	0 - 1
Non-Hazardous Ingredients	N/A	12 - 32
See Section 8 of this MSDS for Exposure Guidelines		

3. HAZARDS IDENTIFICATION

Physical Hazards

APPEARANCE AND ODOR: Black sheet in roll form. Surfaces may include roofing granules, slate, sand, talc or film. Slight asphaltic odor.

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

Inhalation of dust from the product may cause temporary irritation and/or congestion. Individuals affected should be moved to fresh air.

Skin irritation may be treated by gently washing affected area with soap and warm water.

Eye irritation may be treated by flushing eyes with large amounts of water. If irritation persists, seek medical attention.

Potential Health Effects

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.

Exposure Routes

Primary: Inhalation (breathing dust), skin contact and eye contact.

Inhalation: Irritation of the upper respiratory tract may occur. Acute exposure may irritate mucous membranes with tightness in chest, coughing, wheeziness, or congestion.
 Chronic exposure to silica may cause limitation of expansion of the chest, emphysema. Chronic exposure to talc may cause cough, pneumoconiosis.

Skin Contact: Temporary irritation (itching) or redness may occur. Contact with molten asphalt can result in burns.

Absorption: Not applicable

Eye Contact: May irritate eyes. Because of its adhesive and temperature features, the molten asphalt contact with eyes may cause physical damage due to adhesive properties as well as burns.

Ingestion: May cause irritation of the digestive system.

Medical Conditions Aggravated by Exposure

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

4. FIRST AID MEASURES

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. 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. In case of ingestion seek medical attention immediately.

5. FIRE FIGHTING MEASURES

Flash Point: 570°F (299°C) Asphalt Blend Portion

Flammable Limits:

Lower Explosive Limit N/A

Upper Explosive Limit N/A

Auto Ignition: N/A

Extinguishing Media: Foam, CO₂, dry chemical or water spray

Special Fire-fighting Procedures: Wear self-contained breathing apparatus (SCBA) and full protective clothing.

Unusual Fire and Explosive Hazards: None

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 Conservation 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: Keep away from heat, sparks or open flame. 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). Protect from freezing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION		
Read all product instructions before using. Personal protective equipment should include safety eye wear, fire resistant gloves, and long sleeve work clothes to prevent excessive skin contact. No special ventilation systems are required under normal conditions of use in well ventilated areas.		
Exposure Guidelines	OSHA	ACGIH
Calcium Carbonate (1317-65-3)	Total Dust: 15 mg/m ³ TWA Respirable Dust: 5 mg/m ³ TWA	Total Dust: 10 mg/m ³ TWA Respirable Dust: 5 mg/m ³ TWA
Crystalline Silica (containing no asbestos) 14808-60-7	Respirable Dust: 0.1 mg/m ³ TWA	Respirable Fraction: 0.1 mg/m ³ TWA
Talc (containing no asbestos) 14807-96-6	Respirable Dust: (Less than 1% crystalline silica) 2 mg/m ³ TWA ('Silicates')	2 mg/m ³ TWA (Particulate matter containing no asbestos and <1% crystalline)
None of the components in this product are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.		

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
 Specific Gravity: Approximately 1.2 – 1.6 (H2O = 1)
 Boiling Point: over 600°F (315°C)
 Flash Point: over 570°F (299°C)
 Melting Point: over 250°F (121°C)
 Self-Flammability: None Established
 Auto-Flammability: None Established
 pH: N/A
 Vapor Pressure: N/A
 Solubility in Water: Not soluble
 Explosion data: N/A
 VOC: N/A

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
 Oxides of carbon (carbon monoxide, carbon dioxide, 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.

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

Component Carcinogenicity

Crystalline Silica (14808-60-7)	ACGIH: A2 – Suspected Human Carcinogen IARC: Group 1 – Carcinogen to Humans (IARC Monograph 68, 1997, inhaled in the form of quartz or cristobalite from occupational sources)
Talc (14807-96-6)	ACGIH: A4 – Not Classifiable as a Human Carcinogen IARC: Supplement 7, 1987; Monograph 42, 1987 (Group 3 not classifiable)

Additional toxicological Information
 This material is in a solid form; therefore, exposures to hazardous dusts or fumes are not expected to occur. Exposure limits are given for reference only.

Asphalt: 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.

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 Conservation 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).

16. OTHER

NFPA: Fire 1; Health 1; Reactivity 0

HMIS: Flammability 1; Health 1; Reactivity 0

Prepared by:

U.S. PLY, INC. Technical Services Department

P.O. Box 11740

Fort Worth, TX USA 76110

The information and recommendations contained herein are presented in good faith and believed to be correct as of the date hereof. The manufacturer makes no representations as to the completeness or accuracy thereof. Information supplied upon the condition that the persons receiving said information will make their own determination as to its suitability for their particular purpose prior to use. In no event will the manufacturer be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. No representations or warranties, either expressed or implied, including the merchantability or fitness for a particular purpose are made herein with respect to this information or the product to which information refers.

Information contained herein is deemed to be reliable, conservative and accurate. U.S. PLY, Inc. reserves the right to change the design, specification or any other features at any time, without notice, while otherwise maintaining regulatory compliance.

Issue Date: 9/24/04

Revised Date: 2/22/06 Revision Disclosure: Addition of new products. Change of Address.

MATERIAL SAFETY DATA SHEET

1. PRODUCT and COMPANY IDENTIFICATION

Manufacturer

U.S. PLY, INC.
P.O. BOX 11740
Fort Worth, TX 76110

Non Emergency Information

Telephone: U.S. PLY, INC (877) 628-7759 or (817) 413-0103

Emergency Information

Transportation Emergency Telephone: CHEMTREC 1-800-424-9300. The products listed below are registered by the manufacturer, U.S. PLY, INC.

Product Name: USP APP 160S, USP APP 160S PLUS, USP APP 160SCA, USP APP 160M, USP APP BASE, DURAWELD 4S APP, DURAWELD 5S APP, DURAWELD 4M APP, DURAWELD 4MFR APP, SAFEWELD APP BASE, SAFEWELD X4S APP, SAFEWELD X4M APP, SAFEWELD X4FR APP, SAFEWELD 180S APP, SAFEWELD 180M APP, SAFEWELD 180FR APP, USP APP WALKBOARD.

Chemical Name: Asphalt Mixture/Roll Roofing

2. COMPOSITION (Information on Ingredients)

Component	CAS No	Weight %
Chemical Name (common names)		
Asphalt	8052-42-4	40-60
Crystalline Silica (Sand)	14808-60-7	1-5
Talc	14807-96-6	1-4
Non-Hazardous Ingredients	N/A	36-49
See Section 8 of this MSDS for Exposure Guidelines		

3. HAZARDS IDENTIFICATION

Physical Hazards

APPEARANCE AND ODOR: Black sheet in roll form. Surfaces may include roofing granules, slate, sand, talc or film. Slight asphaltic odor.

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

Inhalation of dust from the product may cause temporary irritation and/or congestion. Individuals affected should be moved to fresh air.

Skin irritation may be treated by gently washing affected area with soap and warm water.

Eye irritation may be treated by flushing eyes with large amounts of water. If irritation persists, seek medical attention.

Potential Health Effects

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.

Exposure Routes

Primary: Inhalation (breathing dust), skin contact and eye contact.

Inhalation: Irritation of the upper respiratory tract may occur. Acute exposure may irritate mucous membranes with tightness in chest, coughing, wheeziness, or congestion.

Chronic exposure to silica may cause limitation of expansion of the chest, emphysema. Chronic exposure to talc may cause cough, pneumoconiosis.

Skin Contact: Temporary irritation (itching) or redness may occur. Contact with molten asphalt can result in burns.

Absorption: Not applicable

Eye Contact: May irritate eyes. Because of its adhesive and temperature features, the molten asphalt contact with eyes may cause physical damage due to adhesive properties as well as burns.

Ingestion: May cause irritation of the digestive system.

Medical Conditions Aggravated by Exposure

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

4. FIRST AID MEASURES

- 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. 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. Bath 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. In case of ingestion seek medical attention immediately.

5. FIRE FIGHTING MEASURES

Flash Point: 570°F (+200°C) Asphalt Blend Portion
 Flammable Limits:
 Lower Explosive Limit N/A
 Upper Explosive Limit N/A
 Auto Ignition: N/A

Extinguishing Media: Foam, CO2, dry chemical or water spray

Special Fire-fighting Procedures: Wear self-contained breathing apparatus (SCBA) and full protective clothing.

Unusual Fire and Explosive Hazards: None

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: Keep away from heat, sparks or open flame. 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 (°C to °C). Protect from freezing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Read all product instructions before using. Personal protective equipment should include safety eye wear, fire resistant gloves, and long sleeve work clothes to prevent excessive skin contact. No special ventilation systems are required under normal conditions of use in well ventilated areas.

Exposure Guidelines	OSHA	ACGIH
Crystalline Silica (containing no asbestos) 14808-60-7	Respirable Dust: 0.1 mg/m ³ TWA	Respirable Fraction: 0.01 mg/m ³ TWA
Talc (14807-96-6)	Respirable Dust: (Less than 1% crystalline silica): 2 mg/m ³ TWA ('Silicates')	Respirable fraction: 2mg/m ³ TWA (Particulate matter containing no asbestos and <1% crystalline)

None of the components in this product are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

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
Specific Gravity:	Approximately 1.2 – 1.6 (H2O = 1)
Boiling Point:	over 600°F (°C)
Flash Point:	over 570°F (°C)
Melting Point:	over 250°F (°C)
Self-Flammability:	None Established
Auto-Flammability:	None Established
pH:	N/A
Vapor Pressure:	N/A
Solubility in Water:	Not soluble
Explosion data:	N/A
VOC:	N/A

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

Oxides of carbon (carbon monoxide, carbon dioxide, 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.

Carcinogenicity

There is no data for this product as a whole.

Component Carcinogenicity

Crystalline Silica (14808-60-7)	ACGIH: A2 – Suspected Human Carcinogen NTP: Known Carcinogen (Select Carcinogen) IARC: Monograph 68, 1997; (inhaled in the form of quartz or cristobalite from occupational sources) (Group 1 carcinogenic to humans)
Talc (14807-96-6)	ACGIH: A4 – Not Classifiable as a Human Carcinogen IARC: Supplement 7, 1987; Monograph 42, 1987 (Group 3 not classifiable)

Additional toxicological Information

This material is in a solid form; therefore, exposures to hazardous dusts or fumes are not expected to occur. Exposure limits are given for reference only.

Asphalt: 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.

Crystalline Silica: The International Agency for Research on Cancer (IARC) has classified crystalline silica as a Group 1 substance, carcinogenic to humans. This classification is based on the findings of laboratory animal studies (inhalation and implantation) and epidemiology studies that were considered sufficient for carcinogenicity. Several studies have been conducted to determine the risk of cancer to workers exposed to dusts which contain crystalline silica. However, these studies did not consider other factors or elements that workers may be exposed to. Therefore, the causes of the excess deaths due to cancer could not be precisely determined. Further studies are being conducted to determine the risk of cancer when working with crystalline silica products. Excessive exposure to crystalline silica can cause silicosis, a non-cancerous lung disease.

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 Conservation 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 this 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).

16. OTHER

NFPA: Fire 1; Health 1; Reactivity 0
HMIS: Flammability 1; Health 1; Reactivity 0

Prepared by:
U.S. PLY, INC. Technical Services Department
2000 E. Richmond Ave.
Fort Worth, TX USA 76104

The information and recommendations contained herein are presented in good faith and believed to be correct as of the date hereof. The manufacturer makes no representations as to the completeness or accuracy thereof. Information supplied upon the condition that the persons receiving said information will make their own determination as to its suitability for their particular purpose prior to use. In no event will the manufacturer be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. No representations or warranties, either expressed or implied, including the merchantability or fitness for a particular purpose are made herein with respect to this information or the product to which information refers.

Information contained herein is deemed to be reliable, conservative and accurate. U.S. PLY, Inc. reserves the right to change the design, specification or any other features at any time, without notice, while otherwise maintaining regulatory compliance.

Issue Date: 10/31/05

Revised Date: 2/22/06 Revision Disclosure: Change of Address

MATERIAL SAFETY DATA SHEET

1. PRODUCT and COMPANY IDENTIFICATION

Manufacturer

U.S. PLY, INC.
 P.O. Box 11740
 Fort Worth, TX 76110

Non Emergency Information

Telephone: U.S. PLY, INC. (866) 787-4759 or (817) 413-0103

Emergency Information

Transportation Emergency Telephone: 1-800-424-9300.

Product Name: DURAFLEX 30 SBS BASE, DURAFLEX 60 SBS BASE, DURAFLEX SBS POLYBASE, DURAFLEX SEBS POLYBASE, DURAFLEX 190S SBS, DURAFLEX G4S SBS, DURAFLEX 190 SBS, DURAFLEX G4M SBS, DURAFLEX 190FR SBS, DURAFLEX G4FR SBS, DURAFLEX 250S SBS BASE, DURAFLEX 250 SBS, DURAFLEX 250FR SBS, DURAFLEX DUAL CAP FR SBS, DURAFLEX 60TG SBS BASE, DURAFLEX 90TG SBS BASE, DURAFLEX 90HTTG SBS BASE, DURAFLEX X4S TG SBS BASE, DURAFLEX 4HTS TG SBS BASE, DURAFLEX 190S TG SBS, DURAFLEX 190TG SBS, DURAFLEX 190FR TG SBS, DURAFLEX X4M TG SBS, DURAFLEX 4MHT TG SBS, DURAFLEX X4FR TG SBS, DURAFLEX G4FR TG SBS, DURAFLEX 4MFRHT TG SBS, DURAFLEX ALUM, DURAFLEX COPPER, DURAFLEX COLOR SBS, DURASTAR WH SBS, DURASTAR ALM SBS, DURASTAR WH-TG SBS, DURASTAR ALM-TG SBS, RAPIDGRIP READI-BASE, RAPIDGRIP SR-200, RAPIDGRIP SBS SA CAP, RAPIDGRIP SBS SA FR CAP, RAPIDGRIP SBS UNDERLAYMENT, RAPIDGRIP HT METAL UNDERLAYMENT, USP SBS 160M, USP SBS WALKBOARD

Chemical Name: Asphalt Mixture/Roll Roofing

2. COMPOSITION (Information on Ingredients)

Component	CAS No	Weight %
Chemical Name (common names)		
Asphalt	8052-42-4	55 - 85
Calcium Carbonate	1317-65-3	12 - 30
Crystalline Silica (Sand)	14808-60-7	1 - 5
Talc	14807-96-6	0 - 1
Non-Hazardous Ingredients	N/A	12 - 32
See Section 8 of this MSDS for Exposure Guidelines		

3. HAZARDS IDENTIFICATION

Physical Hazards

APPEARANCE AND ODOR: Black sheet in roll form. Surfaces may include roofing granules, slate, sand, talc or film. Slight asphaltic odor.

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

Inhalation of dust from the product may cause temporary irritation and/or congestion. Individuals affected should be moved to fresh air.

Skin irritation may be treated by gently washing affected area with soap and warm water.

Eye irritation may be treated by flushing eyes with large amounts of water. If irritation persists, seek medical attention.

Potential Health Effects

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.

Exposure Routes

Primary: Inhalation (breathing dust), skin contact and eye contact.

Inhalation: Irritation of the upper respiratory tract may occur. Acute exposure may irritate mucous membranes with tightness in chest, coughing, wheeziness, or congestion.
 Chronic exposure to silica may cause limitation of expansion of the chest, emphysema. Chronic exposure to talc may cause cough, pneumoconiosis.

Skin Contact: Temporary irritation (itching) or redness may occur. Contact with molten asphalt can result in burns.

Absorption: Not applicable

Eye Contact: May irritate eyes. Because of its adhesive and temperature features, the molten asphalt contact with eyes may cause physical damage due to adhesive properties as well as burns.

Ingestion: May cause irritation of the digestive system.

Medical Conditions Aggravated by Exposure

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

4. FIRST AID MEASURES

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. 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. In case of ingestion seek medical attention immediately.

5. FIRE FIGHTING MEASURES

Flash Point: 570°F (299°C) Asphalt Blend Portion

Flammable Limits:

Lower Explosive Limit N/A

Upper Explosive Limit N/A

Auto Ignition: N/A

Extinguishing Media: Foam, CO₂, dry chemical or water spray

Special Fire-fighting Procedures: Wear self-contained breathing apparatus (SCBA) and full protective clothing.

Unusual Fire and Explosive Hazards: None

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 Conservation 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: Keep away from heat, sparks or open flame. 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). Protect from freezing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION		
Read all product instructions before using. Personal protective equipment should include safety eye wear, fire resistant gloves, and long sleeve work clothes to prevent excessive skin contact. No special ventilation systems are required under normal conditions of use in well ventilated areas.		
Exposure Guidelines	OSHA	ACGIH
Calcium Carbonate (1317-65-3)	Total Dust: 15 mg/m ³ TWA Respirable Dust: 5 mg/m ³ TWA	Total Dust: 10 mg/m ³ TWA Respirable Dust: 5 mg/m ³ TWA
Crystalline Silica (containing no asbestos) 14808-60-7	Respirable Dust: 0.1 mg/m ³ TWA	Respirable Fraction: 0.1 mg/m ³ TWA
Talc (containing no asbestos) 14807-96-6	Respirable Dust: (Less than 1% crystalline silica) 2 mg/m ³ TWA ('Silicates')	2 mg/m ³ TWA (Particulate matter containing no asbestos and <1% crystalline)
None of the components in this product are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.		

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
 Specific Gravity: Approximately 1.2 – 1.6 (H2O = 1)
 Boiling Point: over 600°F (315°C)
 Flash Point: over 570°F (299°C)
 Melting Point: over 250°F (121°C)
 Self-Flammability: None Established
 Auto-Flammability: None Established
 pH: N/A
 Vapor Pressure: N/A
 Solubility in Water: Not soluble
 Explosion data: N/A
 VOC: N/A

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
 Oxides of carbon (carbon monoxide, carbon dioxide, 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.

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

Component Carcinogenicity

Crystalline Silica (14808-60-7)	ACGIH: A2 – Suspected Human Carcinogen IARC: Group 1 – Carcinogen to Humans (IARC Monograph 68, 1997, inhaled in the form of quartz or cristobalite from occupational sources)
Talc (14807-96-6)	ACGIH: A4 – Not Classifiable as a Human Carcinogen IARC: Supplement 7, 1987; Monograph 42, 1987 (Group 3 not classifiable)

Additional toxicological Information
 This material is in a solid form; therefore, exposures to hazardous dusts or fumes are not expected to occur. Exposure limits are given for reference only.

Asphalt: 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.

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 Conservation 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).

16. OTHER

NFPA: Fire 1; Health 1; Reactivity 0

HMIS: Flammability 1; Health 1; Reactivity 0

Prepared by:

U.S. PLY, INC. Technical Services Department

P.O. Box 11740

Fort Worth, TX USA 76110

The information and recommendations contained herein are presented in good faith and believed to be correct as of the date hereof. The manufacturer makes no representations as to the completeness or accuracy thereof. Information supplied upon the condition that the persons receiving said information will make their own determination as to its suitability for their particular purpose prior to use. In no event will the manufacturer be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. No representations or warranties, either expressed or implied, including the merchantability or fitness for a particular purpose are made herein with respect to this information or the product to which information refers.

Information contained herein is deemed to be reliable, conservative and accurate. U.S. PLY, Inc. reserves the right to change the design, specification or any other features at any time, without notice, while otherwise maintaining regulatory compliance.

Issue Date: 9/24/04

Revised Date: 2/22/06 Revision Disclosure: Addition of new products. Change of Address.

MATERIAL SAFETY DATA SHEET

1. PRODUCT and COMPANY IDENTIFICATION

Manufacturer

U.S. PLY, INC.
P.O. Box 11740
Fort Worth, TX 76110

Non Emergency Information

Telephone: U.S. PLY, INC. (866) 787-4759 or (817) 413-0103

Emergency Information

Transportation Emergency Telephone: 1-800-424-9300.

Product Name: USP BASE SHEET

Chemical Name: Asphalt Mixture/Asphalt Coated Roll Roofing

2. COMPOSITION (Information on Ingredients)

Component	CAS No	Weight %
Chemical Name (common names)		
Asphalt, oxidized	64742-93-4	45-50
Crystalline Silica*	14808-60-7	40-45
Continuous filament glass fibers	65997-17-3	5-10
See Section 8 of this MSDS for Exposure Guidelines		

* USP Base Sheet is coated with a sand backing which contains crystalline silica. Note: Due to the product form, exposures to hazardous dusts or fumes are not expected to occur.

3. HAZARDS IDENTIFICATION

Physical Hazards

APPEARANCE AND ODOR: Black sheet in roll form with sand and an asphalt order.

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

Inhalation of excessive amounts of dust from the product may cause temporary upper respiratory irritation and/or congestion. Individuals affected should be moved to fresh air.

NOTE: Hydrogen sulphide (H₂S), an extremely toxic gas, may be emitted from heated asphalt and may accumulate in storage tanks and other confined spaces. At low concentrations, H₂S is irritating to the eyes, nose and throat, and at high concentrations (>500ppm) can cause rapid unconsciousness and death. The odor of H₂S cannot be used as an indicator of exposure, because the gas causes rapid olfactory fatigue, which deadens the sense of smell. Use this product only under well ventilated working conditions.

Skin irritation may be treated by gently washing affected area with soap and warm water.

Eye irritation may be treated by flushing eyes with large amounts of water. If irritation persists, seek medical attention.

In the event of fire, follow normal fire fighting procedures to prevent inhalation of smoke and gases.

Potential Health Effects

The primary hazard of this product is nuisance dust. However due to the large size of the particles, little exposure to airborne dust is expected.

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.

Exposure Routes

Primary: Inhalation (breathing dust), skin contact and eye contact.

Inhalation: Irritation of the upper respiratory tract may occur. Acute exposure may irritate mucous membranes with tightness in chest, coughing, wheeziness, or congestion.

Chronic exposure to silica may cause limitation of expansion of the chest, emphysema. Chronic exposure to talc may cause cough, pneumoconiosis.

Skin Contact: Temporary irritation (itching) or redness may occur. Contact with molten asphalt can result in burns.

Absorption: Not applicable

Eye Contact: May irritate eyes. Because of its adhesive and temperature features, the molten asphalt contact with eyes may cause physical damage due to adhesive properties as well as burns.

Ingestion: May cause irritation of the digestive system.

Medical Conditions Aggravated by Exposure

Exposure to dust may aggravate pre-existing upper respiratory, skin, lung or eye diseases or conditions.

4. FIRST AID MEASURES

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. 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. In case of ingestion seek medical attention immediately.

Note: This product is a mechanical irritant, and is not expected to produce any chronic health effects from acute exposures. Treatment should be directed toward removing the source of irritation with symptomatic treatment as necessary.

5. FIRE FIGHTING MEASURES

Flash Point: N/A
Flammable Limits:
 Lower Explosive Limit N/A
 Upper Explosive Limit N/A
Auto Ignition: N/A

General Fire Hazards: There is no potential for fire or explosion.

Extinguishing Media: Foam, CO2, dry chemical or water spray

Special Fire-fighting Procedures: Combustible. Avoid breathing fumes. Wear self-contained breathing apparatus (SCBA) with full face mask and full protective clothing.

Unusual Fire and Explosive Hazards: When heated, fumes may burn if ignition source is provided. Petroleum asphalt fumes can explode if emitted in an enclosed environment and supplied with an ignition source. Burning product will cause thick black smoke.

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 Conservation 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: Keep away from heat, sparks or open flame. 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). Protect from freezing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION		
Read all product instructions before using. Personal protective equipment should include safety eye wear, fire resistant gloves, and long sleeve work clothes to prevent excessive skin contact. No special ventilation systems are required under normal conditions of use in well ventilated areas.		
Exposure Guidelines	OSHA	ACGIH
Crystalline Silica 14808-60-7	Respirable Dust: 0.1 mg/m ³ TWA	0.05 mg/m ³ TWA (This TLV is for the respirable fraction of dust)
See Section 11 – Toxicological Information for component carcinogenicity.		

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid	Self-Flammability:	None Established
Appearance:	Dark mat with sand.	Auto-Flammability:	None Established
Odor:	Asphaltic odor	pH:	N/A
Specific Gravity:	Variable	Vapor Pressure:	N/A
Boiling Point:	over 700°F (over 370°C)	Solubility in Water:	Not soluble
Flash Point:	Not Determined	Explosion data:	N/A
Melting Point:	over 200°F (over 95°C)	VOC:	N/A

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

Oxides of carbon (carbon monoxide, carbon dioxide, carbon particles, and hydrocarbons) are derived from burning.

Hazardous Polymerization

Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

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

Carcinogenicity

There is no data for this product as a whole.

Component Carcinogenicity

Crystalline Silica (14808-60-7)	ACGIH:	A2 – Suspected Human Carcinogen
	NTP:	Known Carcinogen (Select Carcinogen)
	IARC:	Monograph 68, 1997; (inhaled in the form of quartz or cristobalite from occupational sources) (Group 1 (carcinogen to humans))

Additional toxicological Information

Crystalline silica is considered a hazard by inhalation. The International Agency for Research on Cancer (IARC) has classified crystalline silica as a Group 1 substance, carcinogenic to humans. This classification is based on the findings of laboratory animal studies (inhalation and implantation) and epidemiological studies that were considered sufficient for carcinogenicity. Excessive exposure to respirable crystalline silica can cause silicosis, a non-cancerous lung disease. Crystalline silica has not been classified by the Occupational Safety and Health Administration (OSHA).

This material is in a solid form; therefore, exposures to hazardous dusts or fumes are not expected to occur. Exposure limits are given for reference only.

Asphalt: 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 chronic health effects are known to be associated with exposure to continuous filament fibreglass. Results from epidemiologic studies have not shown any increases in respiratory disease or cancer. The IARC has classified continuous filament fibreglass as a Group 3 substance, not classifiable as to its carcinogenicity to humans. Because of the large diameter of continuous filament fibers, these products are not considered respirable.

12. ECOLOGICAL INFORMATION

General Product Information: No additional information is available.

13. DISPOSAL CONSIDERATIONS

This product, as supplied, is not regulated as a hazardous waste by the U.S. Environmental Protection Agency (EPA) under Resource Conservation 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.

Freight Classification: Roofing composition or prepared roofing.

15. REGULATORY INFORMATION

Toxic Substances Control Act (TSCA)

The components in this product are listed on the TSCA Inventory.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

None

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).

Section 311/312 Hazard Categories:

- Immediate Health
- Delayed Health
- Fire Hazard

California Proposition 65:

This product contains chemicals (small amounts of some polynuclear aromatic hydrocarbons) known to the State of California to cause cancer.

16. OTHER

NFPA: Fire 1; Health 1; Reactivity 0
HMIS: Flammability 1; Health 1; Reactivity 0

Prepared by:
U.S. PLY, INC. Technical Services Department
P.O. Box 11740
Fort Worth, TX USA 76110

The information and recommendations contained herein are presented in good faith and believed to be correct as of the date hereof. The manufacturer makes no representations as to the completeness or accuracy thereof. Information supplied upon the condition that the persons receiving said information will make their own determination as to its suitability for their particular purpose prior to use. In no event will the manufacturer be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. No representations or warranties, either expressed or implied, including the merchantability or fitness for a particular purpose are made herein with respect to this information or the product to which information refers.

Information contained herein is deemed to be reliable, conservative and accurate. U.S. PLY, Inc. reserves the right to change the design, specification or any other features at any time, without notice, while otherwise maintaining regulatory compliance.

Issue Date: 6/01/04

Revised Date: 2/22/06 Revision Disclosure: Change of Address

MATERIAL SAFETY DATA SHEET

1. PRODUCT and COMPANY IDENTIFICATION

Manufacturer

U.S. PLY, INC.
 P.O. Box 11740
 Fort Worth, TX 76110

Non Emergency Information

Telephone: U.S. PLY, INC. (866) 787-4759 or (817) 413-0103

Emergency Information

Transportation Emergency Telephone: 1-800-424-9300.

Product Name: USP MINERAL CAP SHEET, USP NVB (NAILABLE VENTING BASE SHEET)

Chemical Name: Asphalt Mixture/Asphalt Coated Roll Roofing

2. COMPOSITION (Information on Ingredients)

Component	CAS No	Weight %
Chemical Name (common names)		
Asphalt, oxidized	64742-93-4	< 60
Calcium Carbonate	1317-65-3	< 40
Crystalline Silica (Sand)	14808-60-7	< 20
Non-Hazardous Ingredients	N/A	< 20
See Section 8 of this MSDS for Exposure Guidelines		

* USP Mineral Cap Sheet and USP NVB are coated with a sand backing which contains crystalline silica. Note: Due to the product form, exposures to hazardous dusts or fumes are not expected to occur.

3. HAZARDS IDENTIFICATION

Physical Hazards

APPEARANCE AND ODOR: Membrane sheet in roll form with mineral and sand surfaces. Asphalt odor.

Under normal use conditions, this product is not expected to create any unusual emergency hazards. Inhalation of excessive amounts of dust from the product may cause temporary upper respiratory irritation and/or congestion. Individuals affected should be moved to fresh air.

NOTE: Hydrogen sulphide (H₂S), an extremely toxic gas, may be emitted from heated asphalt and may accumulate in storage tanks and other confined spaces. At low concentrations, H₂S is irritating to the eyes, nose and throat, and at high concentrations (>500ppm) can cause rapid unconsciousness and death. The odor of H₂S cannot be used as an indicator of exposure, because the gas causes rapid olfactory fatigue, which deadens the sense of smell. Use this product only under well ventilated working conditions.

Skin irritation may be treated by gently washing affected area with soap and warm water. Eye irritation may be treated by flushing eyes with large amounts of water. If irritation persists, seek medical attention.

In the event of fire, follow normal fire fighting procedures to prevent inhalation of smoke and gases.

Potential Health Effects

The primary hazard of this product is nuisance dust. However due to the large size of the particles, little exposure to airborne dust is expected.

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.

Exposure Routes

Primary: Inhalation (breathing dust), skin contact and eye contact.

Inhalation: Irritation of the upper respiratory tract may occur. Acute exposure may irritate mucous membranes with tightness in chest, coughing, wheeziness, or congestion.

Chronic exposure to silica may cause limitation of expansion of the chest, emphysema. Chronic exposure to talc may cause cough, pneumoconiosis.

Skin Contact: Temporary irritation (itching) or redness may occur. Contact with molten asphalt can result in burns.

Absorption: Not applicable

Eye Contact: May irritate eyes. Because of its adhesive and temperature features, the molten asphalt contact with eyes may cause physical damage due to adhesive properties as well as burns.

Ingestion: May cause irritation of the digestive system.

Medical Conditions Aggravated by Exposure

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

4. FIRST AID MEASURES

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. 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. In case of ingestion seek medical attention immediately.

Note: This product is a mechanical irritant, and is not expected to produce any chronic health effects from acute exposures. Treatment should be directed toward removing the source of irritation with symptomatic treatment as necessary.

5. FIRE FIGHTING MEASURES

Flash Point: 570°F (299°C) Asphalt Blend Portion

Flammable Limits:

Lower Explosive Limit N/A

Upper Explosive Limit N/A

Auto Ignition: 750°F (399°C)

General Fire Hazards: There is no potential for fire or explosion.

Extinguishing Media: Foam, CO2, dry chemical, Halon – avoid use of straight water spray

Special Fire-fighting Procedures: Combustible. Avoid breathing fumes. Wear self-contained breathing apparatus (SCBA) with full face mask and full protective clothing.

Unusual Fire and Explosive Hazards: When heated, fumes may burn if ignition source is provided. Petroleum asphalt fumes can explode if emitted in an enclosed environment and supplied with an ignition source. Burning product will cause thick black smoke.

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 Conservation 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: Keep away from heat, sparks or open flame. 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). Protect from freezing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION		
Read all product instructions before using. Personal protective equipment should include safety eye wear, fire resistant gloves, and long sleeve work clothes to prevent excessive skin contact. No special ventilation systems are required under normal conditions of use in well ventilated areas.		
Exposure Guidelines	OSHA	ACGIH
Calcium Carbonate (1317-65-3)	Total Dust: 15 mg/m ³ TWA Respirable Dust: 5 mg/m ³ TWA	Total Dust: 10 mg/m ³ TWA Respirable Dust: 5 mg/m ³ TWA
Crystalline Silica 14808-60-7	Respirable Dust: 0.1 mg/m ³ TWA	Respirable Fraction: 0.1 mg/m ³ TWA
See Section 11 – Toxicological Information for component carcinogenicity.		

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Solid	Self-Flammability: None Established
Appearance: Dark mat with sand.	Auto-Flammability: None Established
Odor: Asphaltic odor	pH: N/A
Specific Gravity: N/A	Vapor Pressure: N/A
Boiling Point: over 700°F (370°C)	Solubility in Water: Not soluble
Flash Point: over 570°F (299°C)	Explosion data: N/A
Melting Point: over 200°F (95°C)	VOC: N/A

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
Oxides of carbon (carbon monoxide, carbon dioxide, carbon particles, and hydrocarbons) are derived from burning.

Hazardous Polymerization
Will not occur.

11. TOXICOLOGICAL INFORMATION

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

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

Component Carcinogenicity

Crystalline Silica (14808-60-7)	ACGIH:	A2 – Suspected Human Carcinogen
	NTP:	Known Carcinogen (select Carcinogen)
	IARC:	Monograph 68, 1997; (inhaled in the form of quartz or cristobalite from occupational sources) (Group 1 (carcinogen to humans))

Additional toxicological Information
Crystalline silica is considered a hazard by inhalation. The International Agency for Research on Cancer (IARC) has classified crystalline silica as a Group 1 substance, carcinogenic to humans. This classification is based on the findings of laboratory animal studies (inhalation and implantation) and epidemiological studies that were considered sufficient to carcinogenicity. Excessive exposure to respirable crystalline silica can cause silicosis, a non-cancerous lung disease. Crystalline silica has not been classified by the Occupational Safety and Health Administration (OSHA).

This material is in a solid form; therefore, exposures to hazardous dusts or fumes are not expected to occur. Exposure limits are given for reference only.

Asphalt: 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 chronic health effects are known to be associated with exposure to continuous filament fiberglass. Results from epidemiologic studies have not shown any increases in respiratory disease or cancer. The IARC has classified continuous filament fiberglass as a Group 3 substance, not classifiable as to its carcinogenicity to humans. Because of the large diameter of continuous filament fibers, these products are not considered respirable.

12. ECOLOGICAL INFORMATION

General Product Information: No additional information is available.

13. DISPOSAL CONSIDERATIONS

This product, as supplied, is not regulated as a hazardous waste by the U.S. Environmental Protection Agency (EPA) under Resource Conservation 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.

Freight Classification: Roofing composition or prepared roofing.

15. REGULATORY INFORMATION

Toxic Substances Control Act (TSCA)

The components in this product are listed on the TSCA Inventory.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

None

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).

Section 311/312 Hazard Categories:

Immediate Health
Delayed Health
Fire Hazard

California Proposition 65:

This product contains chemicals (small amounts of some polynuclear aromatic hydrocarbons) known to the State of California to cause cancer.

16. OTHER

NFPA: Fire 1; Health 1; Reactivity 0

HMIS: Flammability 1; Health 1; Reactivity 0

Prepared by:

U.S. PLY, INC. Technical Services Department
P.O. Box 11740
Fort Worth, TX USA 76110

The information and recommendations contained herein are presented in good faith and believed to be correct as of the date hereof. The manufacturer makes no representations as to the completeness or accuracy thereof. Information supplied upon the condition that the persons receiving said information will make their own determination as to its suitability for their particular purpose prior to use. In no event will the manufacturer be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. No representations or warranties, either expressed or implied, including the merchantability or fitness for a particular purpose are made herein with respect to this information or the product to which information refers.

Information contained herein is deemed to be reliable, conservative and accurate. U.S. PLY, Inc. reserves the right to change the design, specification or any other features at any time, without notice, while otherwise maintaining regulatory compliance.

Issue Date: 9/24/04

Revised Date: 2/22/06 Revision Disclosure: Change of Address

MATERIAL SAFETY DATA SHEET

1. PRODUCT and COMPANY IDENTIFICATION

Manufacturer

U.S. PLY, INC.
P.O. Box 11740
Fort Worth, TX 76110

Non Emergency Information

Telephone: U.S. PLY, INC. (866) 787-4759 or (817)413-8221

Emergency Information

Transportation Emergency Telephone: 1-800-424-9300.

Product Name: USP TYPE IV GLASS PLY SHEET, USP TYPE VI PREMIUM GLASS PLY SHEET

Chemical Name: Asphalt Mixture/Asphalt Coated Roll Roofing

2. COMPOSITION (Information on Ingredients)

Component	CAS No	Weight %
Chemical Name (common names)		
Asphalt, oxidized	64742-93-4	70-75
Crystalline Silica*	14808-60-7	20-25
Continuous filament glass fibers	65997-17-3	1-5
See Section 8 of this MSDS for Exposure Guidelines		

* USP Type IV Glass Ply Sheet, USP Type VI Premium Glass Ply Sheet are coated with a sand backing which contains crystalline silica.
Note: Due to the product form, exposures to hazardous dusts or fumes are not expected to occur.

3. HAZARDS IDENTIFICATION

Physical Hazards

APPEARANCE AND ODOR: Black sheet in roll form with sand and an asphalt order.

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

Inhalation of excessive amounts of dust from the product may cause temporary upper respiratory irritation and/or congestion. Individuals affected should be moved to fresh air.

NOTE: Hydrogen sulphide (H₂S), an extremely toxic gas, may be emitted from heated asphalt and may accumulate in storage tanks and other confined spaces. At low concentrations, H₂S is irritating to the eyes, nose and throat, and at high concentrations (>500ppm) can cause rapid unconsciousness and death. The odor of H₂S cannot be used as an indicator of exposure, because the gas causes rapid olfactory fatigue, which deadens the sense of smell. Use this product only under well ventilated working conditions.

Skin irritation may be treated by gently washing affected area with soap and warm water.

Eye irritation may be treated by flushing eyes with large amounts of water. If irritation persists, seek medical attention.

In the event of fire, follow normal fire fighting procedures to prevent inhalation of smoke and gases.

Potential Health Effects

The primary hazard of this product is nuisance dust. However due to the large size of the particles, little exposure to airborne dust is expected.

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.

Exposure Routes

Primary: Inhalation (breathing dust), skin contact and eye contact.

Inhalation: Irritation of the upper respiratory tract may occur. Acute exposure may irritate mucous membranes with tightness in chest, coughing, wheeziness, or congestion.

Chronic exposure to silica may cause limitation of expansion of the chest, emphysema. Chronic exposure to talc may cause cough, pneumoconiosis.

Skin Contact: Temporary irritation (itching) or redness may occur. Contact with molten asphalt can result in burns.

Absorption: Not applicable

Eye Contact: May irritate eyes. Because of its adhesive and temperature features, the molten asphalt contact with eyes may cause physical damage due to adhesive properties as well as burns.

Ingestion: May cause irritation of the digestive system.

Medical Conditions Aggravated by Exposure

Exposure to dust may aggravate pre-existing upper respiratory, skin, lung or eye diseases or conditions.

4. FIRST AID MEASURES

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. 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. In case of ingestion seek medical attention immediately.

Note: This product is a mechanical irritant, and is not expected to produce any chronic health effects from acute exposures. Treatment should be directed toward removing the source of irritation with symptomatic treatment as necessary.

5. FIRE FIGHTING MEASURES

Flash Point: N/A
Flammable Limits:
 Lower Explosive Limit N/A
 Upper Explosive Limit N/A
Auto Ignition: N/A

General Fire Hazards: There is no potential for fire or explosion.

Extinguishing Media: Foam, CO2, dry chemical or water spray

Special Fire-fighting Procedures: Combustible. Avoid breathing fumes. Wear self-contained breathing apparatus (SCBA) with full face mask and full protective clothing.

Unusual Fire and Explosive Hazards: When heated, fumes may burn if ignition source is provided. Petroleum asphalt fumes can explode if emitted in an enclosed environment and supplied with an ignition source. Burning product will cause thick black smoke.

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 Conservation 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: Keep away from heat, sparks or open flame. 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). Protect from freezing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION		
Read all product instructions before using. Personal protective equipment should include safety eye wear, fire resistant gloves, and long sleeve work clothes to prevent excessive skin contact. No special ventilation systems are required under normal conditions of use in well ventilated areas.		
Exposure Guidelines	OSHA	ACGIH
Crystalline Silica 14808-60-7	Respirable Dust: 0.1 mg/m ³ TWA	0.05 mg/m ³ TWA (This TLV is for the respirable fraction of dust)
See Section 11 – Toxicological Information for component carcinogenicity.		

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid	Self-Flammability:	None Established
Appearance:	Dark mat with sand.	Auto-Flammability:	None Established
Odor:	Asphaltic odor	pH:	N/A
Specific Gravity:	Variable	Vapor Pressure:	N/A
Boiling Point:	over 700°F (over 370°C)	Solubility in Water:	Not soluble
Flash Point:	Not Determined	Explosion data:	N/A
Melting Point:	over 200°F (over 95°C)	VOC:	N/A

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

Oxides of carbon (carbon monoxide, carbon dioxide, carbon particles, and hydrocarbons) are derived from burning.

Hazardous Polymerization

Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

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

Carcinogenicity

There is no data for this product as a whole.

Component Carcinogenicity

Crystalline Silica (14808-60-7)	ACGIH:	A2 – Suspected Human Carcinogen
	NTP:	Known Carcinogen (Select Carcinogen)
	IARC:	Monograph 68, 1997; (inhaled in the form of quartz or cristobalite from occupational sources) (Group 1 (carcinogen to humans))

Additional toxicological Information

Crystalline silica is considered a hazard by inhalation. The International Agency for Research on Cancer (IARC) has classified crystalline silica as a Group 1 substance, carcinogenic to humans. This classification is based on the findings of laboratory animal studies (inhalation and implantation) and epidemiological studies that were considered sufficient for carcinogenicity. Excessive exposure to respirable crystalline silica can cause silicosis, a non-cancerous lung disease. Crystalline silica has not been classified by the Occupational Safety and Health Administration (OSHA).

This material is in a solid form; therefore, exposures to hazardous dusts or fumes are not expected to occur. Exposure limits are given for reference only.

Asphalt: 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 chronic health effects are known to be associated with exposure to continuous filament fibreglass. Results from epidemiologic studies have not shown any increases in respiratory disease or cancer. The IARC has classified continuous filament fibreglass as a Group 3 substance, not classifiable as to its carcinogenicity to humans. Because of the large diameter of continuous filament fibers, these products are not considered respirable.

12. ECOLOGICAL INFORMATION

General Product Information: No additional information is available.

13. DISPOSAL CONSIDERATIONS

This product, as supplied, is not regulated as a hazardous waste by the U.S. Environmental Protection Agency (EPA) under Resource Conservation 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.

Freight Classification: Roofing composition or prepared roofing.

15. REGULATORY INFORMATION

Toxic Substances Control Act (TSCA)

The components in this product are listed on the TSCA Inventory.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

None

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).

Section 311/312 Hazard Categories:

Immediate Health
Delayed Health
Fire Hazard

California Proposition 65:

This product contains chemicals (small amounts of some polynuclear aromatic hydrocarbons) known to the State of California to cause cancer.

16. OTHER

NFPA: Fire 1; Health 1; Reactivity 0
HMIS: Flammability 1; Health 1; Reactivity 0

Prepared by:

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