

Section 1 - Chemical Product and Company Identification

Product Name Atactic Polypropylene Membranes
CAS# Mixture/None Assigned
Generic Name APP Modified Bitumen Roofing Material
Formula Mixture
Chemical Name: Mixture
Hazard Label RSD-009
Manufacturer Information

Johns Manville
 Roofing Systems Group
 P.O. Box 5108
 Denver, CO 80127 USA

Telephone: 303-978-2000 8:00AM-5:00PM M-F
 Internet Address: <http://www.jm.com>
 Emergency: 800-424-9300 (Chemtrec, In English)

Trade Names:

Dibiten™;	Poly/4.5 FR;
Poly/4;	Dibiflash;
Poly/4.5;	Polygum Smooth
Poly/5;	

Section 2 - Composition / Information on Ingredients

CAS #	Component	Percent
64742-93-4	Asphalt, oxidized	50-65
9003-07-0	Polypropylene	10-25
1317-65-3	Calcium carbonate	1-20*
Not Available	Colemanite	0-25**
14808-60-7	Crystalline silica	0.1-15*
1309-37-1	Iron oxide	1-5*
1317-80-2	Rutile (TiO2)	1-5*
1332-58-7	Kaolin	1-5*
1333-86-4	Carbon black	1-5*
1344-09-8	Sodium silicate	1-5*
64742-52-5	Petroleum distillates, hydrotreated heavy naphthenic	1-5
9010-79-1	Ethylene-Propylene polymer	1-5
14807-96-6	Talc	0-5*
Not Available	Polyethylene film (encapsulated)	<1
1308-38-9	Chromium (III) oxide	<0.9***

Additional Component Information

* Note: Due to the product form, exposures to hazardous dusts or fumes are not expected to occur. Exposure limits are given for reference only.
 ** Component of FR products only.
 *** Chromium (III) oxide is present only in gray, white, and desert blend colored roof granules.

Section 3 - Hazards Identification

Emergency Overview

APPEARANCE AND ODOR: Various colored mats with a variety of surfaces: slate, flakes, roofing granules, slag, sand, or talc; asphalt odor.

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

Potential Health Effects

Summary

Due to the large size of the particles, minimal exposure to airborne dust is expected. Primarily a nuisance dust.

Inhalation

Irritation of the upper respiratory tract (scratchy throat), coughing, and congestion may occur in extreme exposures.

Skin

Temporary irritation (itching) or redness may occur.

Absorption

Not applicable

Ingestion

This product is not intended to be ingested or eaten under normal conditions of use. If ingested, it may cause severe irritation to the gastrointestinal (GI) tract, especially the stomach.

Eyes

Temporary irritation (itching) or redness may occur.

Primary Routes of Entry (Exposure)

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

Target Organs

Upper respiratory passages, skin, and eyes.

Medical Conditions Aggravated by Exposure

As with any dust, pre-existing upper respiratory and lung diseases or conditions may be aggravated.

Section 4 - First Aid Measures

First Aid: Inhalation

Remove to fresh air. Drink water to clear throat, and blow nose to remove dust.

First Aid: Skin

Wash gently with soap and warm water. Wash hands before eating, smoking, or using the restroom. Do not eat or drink while working with this product.

First Aid: Ingestion

Product is not intended to be ingested or eaten. If this product is ingested, irritation of the gastrointestinal (GI) tract may occur, and should be treated symptomatically. Rinse mouth with water, and drink plenty of water to help reduce the irritation. No chronic effects are expected following ingestion.

First Aid: Eyes

Do not rub or scratch your eyes. Dust particles may cause the eye to be scratched. Flush eyes with large amounts of water for 5-15 minutes. If irritation persists, contact a medical professional.

First Aid: Notes to Physician

This product is not expected to cause any chronic health effects. Treatment should be directed toward removing the source of irritation with symptomatic treatment as necessary.

Section 5 - Fire Fighting Measures

Flash Point: Not applicable

Upper Flammable Limit (UFL): Not determined

Auto Ignition: Not determined

Rate of Burning: Not determined

General Fire Hazards

There is no potential for spontaneous fire or explosion.

Hazardous Combustion Products

Thick black smoke.

Extinguishing Media

Foam, carbon dioxide (CO₂), dry chemical ABC rated.

Fire Fighting Equipment/Instructions

No special procedures are expected to be necessary for this product. Normal fire fighting procedures should be followed to avoid inhalation of smoke and gases.

Method Used: Not applicable

Lower Flammable Limit (LFL): Not determined

Flammability Classification: Not determined

Section 6 - Accidental Release Measures

Containment Procedures

Pick up large pieces. 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 Procedures

Wastes may be hazardous as defined by the Resource Conservation and Recovery Act (RCRA; 40 CFR 261). Comply with state and local regulations for disposal of fiber glass products. If you are unsure of the regulations, contact your local Public Health Department, or the local office of the Environmental Protection Agency (EPA).

Section 7 - Handling and Storage

Handling Procedures

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 Procedures

Keep this product from heat, sparks, or open flame. Warehouse storage should be in accordance with package directions, if any. Material should be kept dry, and protected from moisture.

Section 8 - Exposure Controls / Personal Protection

Exposure Guidelines

A: General Product Information

Protective equipment should be provided as necessary to prevent excessive skin contact.

B: Component Exposure Limits

Calcium carbonate (1317-65-3)

OSHA: 15 mg/m³ TWA (total dust); 5 mg/m³ TWA (respirable fraction)

Crystalline silica (14808-60-7)

ACGIH: 0.025 mg/m³ TWA (respirable fraction)

OSHA: 0.1 mg/m³ TWA (respirable dust)

Carbon black (1333-86-4)

ACGIH: 3.5 mg/m³ TWA

OSHA: 3.5 mg/m³ TWA

Iron oxide (1309-37-1)

ACGIH: 5 mg/m³ TWA (respirable fraction)

OSHA: 10 mg/m³ TWA (fume)

Kaolin (1332-58-7)

ACGIH: 2 mg/m³ TWA (respirable fraction, particulate matter containing no asbestos and < 1% crystalline silica)

OSHA: 10 mg/m³ TWA (total dust); 5 mg/m³ TWA (respirable fraction)

Talc (14807-96-6)

ACGIH: 2 mg/m³ TWA (respirable fraction, particulate matter containing no asbestos and < 1% crystalline silica)

OSHA: 2 mg/m³ TWA (respirable dust, less than 1% crystalline silica)

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Safety glasses with sideshields are recommended to keep dust out of the eyes.

Personal Protective Equipment: Skin

Leather or cotton gloves are optional.

Personal Protective Equipment: Respiratory

Not required unless used with asphalt or coal tar mastics. In those cases, follow the specific precautions for the material being used.

Ventilation

No special ventilation systems are required under normal conditions of use.

Personal Protective Equipment: General

No additional information available.

Section 9 - Physical & Chemical Properties

Appearance:	Various colored mats with a variety of surfaces.	Odor:	Asphalt odor
Physical State:	solid	pH:	Not applicable
Vapor Pressure:	Not applicable	Vapor Density:	Not applicable
Boiling Point:	370°C/700°F	Melting Point:	95°C/200°F
Solubility (H₂O):	Insoluble	Specific Gravity:	1.2-1.6
Freezing Point:	Not Applicable	Solids Content	Not applicable
Evaporation Rate:	Not applicable	Viscosity:	Not applicable
Percent Volatile:	0	VOC:	Not applicable

Section 10 - Chemical Stability & Reactivity Information**Chemical Stability**

This 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

The decomposition products from this material are those that would be expected from any organic (carbon-containing) material, and are mainly derived from pyrolysis, or burning. These decomposition products may include carbon monoxide, carbon dioxide, carbon particles, and hydrocarbons.

Hazardous Polymerization

Will not occur.

Section 11 - Toxicological Information**Acute Toxicity****A: General Product Information**

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

B: Component Analysis - LD50/LC50**Asphalt, oxidized (64742-93-4)**

Oral LD50 Rat: >5000 mg/kg; Dermal LD50 Rabbit: >2000 mg/kg

Crystalline silica (14808-60-7)

Oral LD50 Rat: 500 mg/kg

Carbon black (1333-86-4)

Oral LD50 Rat: >15400 mg/kg; Dermal LD50 Rabbit: >3 g/kg

Sodium silicate (1344-09-8)

Oral LD50 Rat: 1153 mg/kg

Iron oxide (1309-37-1)

Oral LD50 Rat: >10000 mg/kg

Petroleum distillates, hydrotreated heavy naphthenic (64742-52-5)

Inhalation LC50 Rat: 2.18 mg/L/4H; Oral LD50 Rat: >5000 mg/kg; Dermal LD50 Rabbit: >2000 mg/kg

Carcinogenicity**A: General Product Information**

No data for this product as a whole.

B: Component Carcinogenicity**Polypropylene (9003-07-0)**

IARC: Group 3 - Not Classifiable (IARC Supplement 7 [1987], Monograph 19 [1979])

Crystalline silica (14808-60-7)

ACGIH: A2 - Suspected Human Carcinogen
NTP: Known Carcinogen (Select Carcinogen)
IARC: Group 1 - Known Human Carcinogen (IARC Monograph 68 [1997])

Carbon black (1333-86-4)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Group 2B - Possibly Carcinogenic to Humans (IARC Monograph 93 posted, Monograph 65 [1996])

Iron oxide (1309-37-1)

ACGIH: A4 - Not Classifiable as a Human Carcinogen (dust and fume)
IARC: Group 3 - Not Classifiable (IARC Supplement 7 [1987], Monograph 1 [1972])

Chromium (III) oxide (1308-38-9)

IARC: Group 3 - Not Classifiable (IARC Monograph 49 [1990] Supplement 7 [1987] Monograph 23 [1980] Monograph 2 [1973])

Kaolin (1332-58-7)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

Talc (14807-96-6)

ACGIH: A4 - Not Classifiable as a Human Carcinogen (containing no asbestos fibers); A1 - Confirmed Human Carcinogen (containing asbestos fibers)
IARC: Group 3 - Not Classifiable (IARC Monograph 93 posted (inhaled), Supplement 7 [1987], Monograph 42 [1987])

Chronic Toxicity

Note: Due to the product form, exposures to hazardous dusts or fumes are not expected to occur. Exposure limits are given for reference only.

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 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.

Asphalt (asphalt CAS # 8052-42-4 and oxidized asphalt 64742-93-4; bitumens): In 1994, a published review of 20 epidemiology studies of asphalt workers and roofers agreed with the 1985/1987 conclusions of IARC (International Agency for Research on Cancer), that current human evidence is inadequate for the carcinogenicity of asphalt fumes in humans. In 1985/87, IARC concluded the following: (a) Bitumens are not classifiable as to their carcinogenicity to humans (Group 3). (b) Extracts of steam- and air-refined bitumens are possibly carcinogenic to humans (Group 2B). IARC found that evidence for carcinogenicity from animal studies was: inadequate for undiluted air-refined bitumens; limited for steam-refined and cracking-residue bitumens; sufficient for extracts of steam-refined and air-refined bitumen. Rodents that breathed high concentrations of asphalt fumes for extended periods of time did not develop cancer but some did develop bronchitis and pneumonitis. Repeated application of condensed extracts of certain asphalt fumes to the skin of mice resulted in skin cancers; however, the asphalt fume condensates in these studies had been heated to excessively high temperatures (316°C/601° F) for seven to ten hours while being continually stirred. This is not typical of any asphalt application. IARC found that evidence for carcinogenicity from human studies was inadequate. Studies of roofers indicated an excess of cancers; however, IARC concluded that, since roofers may be exposed also to coal-tar pitches and other materials, "the excess cancer risk cannot be attributed specifically to bitumens." Trace amounts of polynuclear aromatic hydrocarbons (PAHs) may be present in some asphalts and can be released upon excessive heating, which results in thermal cracking of the asphalt compounds. Some of these PAHs have been identified as having the potential to induce carcinogenic and reproductive health effects.

Section 12 - Ecological Information

Ecotoxicity

A: General Product Information

No data available for this product.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Asphalt, oxidized (64742-93-4)

72 Hr EC50 Selenastrum capricornutum: 56 mg/L

Carbon black (1333-86-4)

24 Hr EC50 Daphnia magna: >5600 mg/L

Sodium silicate (1344-09-8)

96 Hr LC50 Lepomis macrochirus: 301-478 mg/L; 96 Hr LC50 Brachydanio rerio: 3185 mg/L [semi-static]

96 Hr EC50 Daphnia magna: 216 mg/L

Petroleum distillates, hydrotreated heavy naphthenic (64742-52-5)

96 Hr LC50 Pimephales promelas: >5000 mg/L

48 Hr EC50 Daphnia magna: >1000 mg/L

Talc (14807-96-6)

96 Hr LC50 Brachydanio rerio: >100 g/L [semi-static]

Section 13 - Disposal Considerations

US EPA Waste Number & Descriptions

A: General Product Information

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 your local Public Health Department, or the local office of the EPA.

B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

Section 14 - Transportation Information

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

Section 15 - Regulatory Information

US Federal Regulations

A: General Product Information

SARA 311/312: This product is not classified as hazardous under SARA 311/312.

B: Component Analysis

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).

State Regulations

A: General Product Information

Other state regulations may apply. Check individual state requirements.

B: Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS #	CA	FL	MA	MN	NJ	PA
Calcium carbonate	1317-65-3	No	No	Yes	Yes	No	Yes
Crystalline silica	14808-60-7	No	No	Yes	Yes	Yes	Yes
Carbon black	1333-86-4	Yes	No	Yes	Yes	Yes	Yes
Iron oxide	1309-37-1	Yes	No	Yes	Yes	Yes	Yes
Chromium (III) oxide	1308-38-9	No	No	Yes	No	Yes	No
Rutile (TiO ₂)	1317-80-2	No	No	No	No	No	Yes
Kaolin	1332-58-7	No	No	Yes	Yes	No	Yes
Talc	14807-96-6	Yes	No	Yes	Yes	Yes	Yes

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
WARNING! This product contains a chemical known to the state of California to cause cancer.

Crystalline silica CAS# 14808-60-7
Carbon black CAS# 133-86-4

Other Regulatory Information**A: General Product Information**

No information available for the product.

B: TSCA Status

This product and its components are listed on the TSCA 8(b) inventory.

None of the components listed in this product are listed on the TSCA Export Notification 12(b) list.

C: Component Analysis - Inventory

Component	CAS #	TSCA	DSL	EINECS
Asphalt, oxidized	64742-93-4	Yes	Yes	Yes
Polypropylene	9003-07-0	Yes	Yes	No
Calcium carbonate	1317-65-3	Yes	No	Yes
Crystalline silica	14808-60-7	Yes	Yes	Yes
Carbon black	1333-86-4	Yes	Yes	Yes
Sodium silicate	1344-09-8	Yes	Yes	Yes
Iron oxide	1309-37-1	Yes	Yes	Yes
Petroleum distillates, hydrotreated heavy naphthenic	64742-52-5	Yes	Yes	Yes
Chromium (III) oxide	1308-38-9	Yes	Yes	Yes
Rutile (TiO ₂)	1317-80-2	Yes	Yes	Yes
Ethylene-Propylene polymer	9010-79-1	Yes	Yes	No
Kaolin	1332-58-7	Yes	Yes	No
Talc	14807-96-6	Yes	Yes	Yes

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Crystalline silica	14808-60-7	1 %
Carbon black	1333-86-4	1 %
Iron oxide	1309-37-1	1 %
Chromium (III) oxide	1308-38-9	1 %

WHMIS Classification

Controlled Product Classification: D2A, based on the IARC classification of crystalline silica.

Section 16 - Other Information**Other Information**

Prepared for:
Johns Manville
Roofing Systems Group
P. O. Box 5108

Material Name: Atactic Polypropylene Membranes**Material Safety Data
Sheet ID: 3135**

Denver, CO USA 80217-5108

Prepared by:
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The information herein is presented in good faith and believed to be accurate as of the effective date given. However, no warranty, expressed or implied, is given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.

Date	MSDS #	Reason
08/01/00	3135-1.0000	New MSDS authoring system.
01/12/01	3135-1.0100	Update crystalline silica Sect. 8 (ACGIH exposure guideline) and Sect. 11 (ACGIH suspected carcinogen).
08/08/01	3135-1.0101	Trade Names - Deleted Mineral and Mineral FR - Discontinued
1/21/02	3135-1.0102	Sect. 1: Dibiten™ listed as a separate trade name. Dibiten logo discontinued.
05/10/04	3135-1.0103	Regulatory update. Minor edits.
12/28/05	3135-1.0104	Regulatory update. Minor edits in Section 15 WHMIS.

This is the end of MSDS # 3135