

SAFETY DATA SHEET

1. Identification

Material name: POLYROOF S.F. (SOLVENT FREE) 3 US GAL
Material: 361592 803

Recommended use and restriction on use

Recommended use: Adhesive
Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information

Tremco Incorporated
3735 Green Road
BEACHWOOD OH 44122
US

Contact person: EH&S Department
Telephone: 216-292-5000
Emergency telephone number: 1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification

Health Hazards

Respiratory sensitizer	Category 1
Skin sensitizer	Category 1
Carcinogenicity	Category 2
Toxic to reproduction	Category 1B

Unknown toxicity - Health

Acute toxicity, oral	0.99 %
Acute toxicity, dermal	7.42 %
Acute toxicity, inhalation, vapor	100 %
Acute toxicity, inhalation, dust or mist	99.68 %

Environmental Hazards

Acute hazards to the aquatic environment	Category 2
--	------------

Unknown toxicity - Environment

Acute hazards to the aquatic environment	73.93 %
Chronic hazards to the aquatic environment	100 %

Label Elements

Hazard Symbol:



Signal Word:	Danger
Hazard Statement:	May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Suspected of causing cancer. May damage fertility or the unborn child. Toxic to aquatic life.
Precautionary Statement:	
Prevention:	Avoid breathing dust/fume/gas/mist/vapors/spray. [In case of inadequate ventilation] wear respiratory protection. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.
Response:	If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. If exposed or concerned: Get medical advice/attention. Specific treatment (see this label). Wash contaminated clothing before reuse.
Storage:	Store locked up.
Disposal:	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
Other hazards which do not result in GHS classification:	None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Asphalt	64741-56-6	30 - 60%
Butyl benzyl phthalate	85-68-7	15 - 40%
Carbon Black	1333-86-4	5 - 10%
4,4'-Methylene bis(phenylisocyanate)	101-68-8	1 - 5%
Diphenylmethane diisocyanate	26447-40-5	0.5 - 1.5%
Tosyl isocyanate	4083-64-1	0.5 - 1.5%
Maleic anhydride	108-31-6	0.1 - 1%
Dibutyltin diacetate	1067-33-0	0.1 - 1%
Calcium oxide	1305-78-8	0.1 - 1%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Ingestion:	Call a POISON CENTER/doctor/.../if you feel unwell. Rinse mouth.
Inhalation:	Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. Move to fresh air. If breathing is difficult, give oxygen.
Skin Contact:	If skin irritation occurs: Get medical advice/attention. Destroy or thoroughly clean contaminated shoes. Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. If skin irritation or an allergic skin reaction develops, get medical attention.
Eye contact:	Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. If eye irritation persists: Get medical advice/attention.

Most important symptoms/effects, acute and delayed

Symptoms: May cause skin and eye irritation.

Indication of immediate medical attention and special treatment needed

Treatment: Symptoms may be delayed.

5. Fire-fighting measures

General Fire Hazards: No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical: During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ventilate closed spaces before entering them. Evacuate area. See Section 8 of the SDS for Personal Protective Equipment. Keep upwind. Keep unauthorized personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Methods and material for containment and cleaning up:

Dam and absorb spillages with sand, earth or other non-combustible material. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

Notification Procedures:

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental Precautions:

Avoid release to the environment. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling:

Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities:

Store locked up.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	type	Exposure Limit Values	Source
Asphalt - Inhalable fraction. - as benzene solubles	TWA	0.5 mg/m3	US. ACGIH Threshold Limit Values (2011)
Carbon Black - Inhalable fraction.	TWA	3 mg/m3	US. ACGIH Threshold Limit Values (2011)
Carbon Black	PEL	3.5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
4,4'-Methylene bis(phenylisocyanate)	TWA	0.005 ppm	US. ACGIH Threshold Limit Values (2011)
	Ceiling	0.02 ppm 0.2 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Maleic anhydride - Inhalable fraction and vapor.	TWA	0.01 mg/m3	US. ACGIH Threshold Limit Values (02 2013)
Maleic anhydride	PEL	0.25 ppm 1 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Dibutyltin diacetate - as Sn	STEL	0.2 mg/m3	US. ACGIH Threshold Limit Values (2011)

	TWA	0.1 mg/m ³	US. ACGIH Threshold Limit Values (2011)
	PEL	0.1 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Calcium oxide	TWA	2 mg/m ³	US. ACGIH Threshold Limit Values (2011)
	PEL	5 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)

Chemical name	type	Exposure Limit Values	Source
Asphalt - Aerosol, inhalable. - as benzene solubles	TWA	0.5 mg/m ³	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Asphalt - Inhalable fraction. - as benzene solubles	TWAEV	0.5 mg/m ³	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Asphalt - Fume.	TWA	5 mg/m ³	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Carbon Black - Inhalable	TWA	3 mg/m ³	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (09 2011)
Carbon Black	TWAEV	3.5 mg/m ³	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Carbon Black	TWA	3.5 mg/m ³	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
4,4'-Methylene bis(phenylisocyanate)	CEILING	0.01 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	0.005 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
4,4'-Methylene bis(phenylisocyanate)	TWAEV	0.005 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
	CEV	0.02 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)

4,4'-Methylene bis(phenylisocyanate)	TWA	0.005 ppm	0.051 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Maleic anhydride	TWA	0.1 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Maleic anhydride	TWAEV	0.1 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Maleic anhydride	TWA	0.25 ppm	1.0 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)

Appropriate Engineering Controls Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.

Individual protection measures, such as personal protective equipment

General information: Use personal protective equipment as required.

Eye/face protection: Wear goggles/face shield.

Skin Protection

Hand Protection: Use suitable protective gloves if risk of skin contact.

Other: Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

Hygiene measures: Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin.

9. Physical and chemical properties

Appearance

Physical state: liquid
Form: Viscous Liquid
Color: Black
Odor: Slight odor

Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	No data available.
Flash Point:	162 °C 324 °F(Setaflash Closed Cup)
Evaporation rate:	Slower than n-Butyl Acetate
Flammability (solid, gas):	No
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	Vapors are heavier than air and may travel along the floor and in the bottom of containers.
Relative density:	1.0504
Solubility(ies)	
Solubility in water:	Insoluble in water
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of Hazardous Reactions:	No data available.
Conditions to Avoid:	Avoid heat or contamination.
Incompatible Materials:	Alcohols. Amines. Strong acids. Avoid contact with oxidizing agents (e.g. nitric acid, peroxides and chromates). Strong bases. Water, moisture.
Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Ingestion:	May be ingested by accident. Ingestion may cause irritation and malaise.
Inhalation:	In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.
Skin Contact:	Causes mild skin irritation. May cause an allergic skin reaction.

Eye contact: Eye contact is possible and should be avoided.

Information on toxicological effects**Acute toxicity (list all possible routes of exposure)****Oral**

Product: ATEmix: 459,433.04 mg/kg

Dermal

Product: ATEmix: 6,438.11 mg/kg

Inhalation

Product: No data available.

Repeated dose toxicity

Product: No data available.

Skin Corrosion/Irritation

Product: No data available.

Serious Eye Damage/Eye Irritation

Product: No data available.

Specified substance(s):

Asphalt	in vivo (Rabbit, 24 hrs): Not irritating
Butyl benzyl phthalate	in vivo (Rabbit, 24 - 72 hrs): Not irritating
Carbon Black	in vivo (Rabbit, 24 - 72 hrs): Not irritating
4,4'-Methylene bis(phenylisocyanate)	in vivo (Rabbit, 24 - 72 hrs): Not irritating
Maleic anhydride	in vivo (Rabbit, 24 hrs): Highly irritating
Calcium oxide	in vivo (Rabbit, 24 hrs): Category 1

Respiratory or Skin Sensitization

Product: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause sensitization by inhalation.

Carcinogenicity

Product: Suspected of causing cancer.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

Asphalt	Overall evaluation: Possibly carcinogenic to humans.
Carbon Black	Overall evaluation: Possibly carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ Cell Mutagenicity**In vitro****Product:** No data available.**In vivo****Product:** No data available.**Reproductive toxicity****Product:** May damage fertility or the unborn child.**Specific Target Organ Toxicity - Single Exposure****Product:** No data available.**Specific Target Organ Toxicity - Repeated Exposure****Product:** No data available.**Aspiration Hazard****Product:** No data available.**Other effects:** No data available.**12. Ecological information****Ecotoxicity:****Acute hazards to the aquatic environment:****Fish****Product:** No data available.**Specified substance(s):**Butyl benzyl phthalate LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): 1.39 - 3.88 mg/l MortalityMaleic anhydride LC 50 (Bluegill (*Lepomis macrochirus*), 24 h): 150 mg/l Mortality**Aquatic Invertebrates**

Product: No data available.

Specified substance(s):

Butyl benzyl phthalate	EC 50 (Water flea (Daphnia magna), 48 h): > 10 mg/l Intoxication
	EC 50 (Opossum shrimp (Americamysis bahia), 48 h): > 0.9 mg/l Mortality
	EC 50 (Water flea (Daphnia magna), 24 h): > 10 mg/l Intoxication
	EC 50 (Water flea (Daphnia magna), 21 d): > 0.76 mg/l Intoxication
	EC 50 (Water flea (Daphnia magna), 14 d): > 0.76 mg/l Intoxication

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

Asphalt	LL 50 (Oncorhynchus mykiss, 28 d): > 1,000 mg/l interpreted
Butyl benzyl phthalate	NOAEL (Pimephales promelas, 126 d): 64.6 - 67.5 µg/l experimental result
Carbon Black	NOAEL (Salmo sp., 30 d): 17 mg/l QSAR
Calcium oxide	NOAEL (Oncorhynchus mykiss, 60 d): 307 mg/l interpreted

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

Persistence and Degradability

Biodegradation

Product: No data available.

BOD/COD Ratio

Product: No data available.

Bioaccumulative Potential

Bioconcentration Factor (BCF)

Product: No data available.

Specified substance(s):

Butyl benzyl phthalate	Bluegill (Lepomis macrochirus), Bioconcentration Factor (BCF): 772 (Flow through)
------------------------	---

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Specified substance(s):

Butyl benzyl phthalate	Log Kow: 4.91
Dibutyltin diacetate	Log Kow: 1.27

Mobility in Soil: No data available.

Other Adverse Effects: Toxic to aquatic organisms.

13. Disposal considerations

Disposal instructions: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging: No data available.

14. Transport information

TDG:

Not Regulated

CFR / DOT:

Not Regulated

IMDG:

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Butyl Benzyl Phthalate), 9, PG III, MARINE POLLUTANT

Further Information:

The above shipping description may not be accurate for all container sizes and all modes of transportation. Please refer to Bill of Lading.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Butyl benzyl phthalate	100 lbs.
4,4'-Methylene bis(phenylisocyanate)	5000 lbs.
Maleic anhydride	5000 lbs.
Dioctyl phthalate	100 lbs.
Chlorobenzene	100 lbs.
Methanol	5000 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**Hazard categories**

Delayed (Chronic) Health Hazard
Immediate (Acute) Health Hazards

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Butyl benzyl phthalate	100 lbs.
4,4'-Methylene bis(phenylisocyanate)	5000 lbs.
Maleic anhydride	5000 lbs.
Dioctyl phthalate	100 lbs.
Chlorobenzene	100 lbs.
Methanol	5000 lbs.

SARA 311/312 Hazardous Chemical

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
Asphalt	500 lbs
Butyl benzyl phthalate	500 lbs
Carbon Black	500 lbs
4,4'-Methylene bis(phenylisocyanate)	500 lbs
Diphenylmethane diisocyanate	500 lbs
Tosyl isocyanate	500 lbs
Maleic anhydride	500 lbs
Dibutyltin diacetate	500 lbs
Calcium oxide	500 lbs

SARA 313 (TRI Reporting)

<u>Chemical Identity</u>
4,4'-Methylene bis(phenylisocyanate)

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

US State Regulations**US. California Proposition 65**

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

US. New Jersey Worker and Community Right-to-Know Act

<u>Chemical Identity</u>
Asphalt
Butyl benzyl phthalate
Carbon Black
4,4'-Methylene bis(phenylisocyanate)

US. Massachusetts RTK - Substance List

Chemical Identity

Asphalt
Butyl benzyl phthalate
Carbon Black
4,4'-Methylene bis(phenylisocyanate)
Dioctyl phthalate
Crystalline Silica (Quartz)/ Silica Sand

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

Asphalt
Butyl benzyl phthalate
Carbon Black
4,4'-Methylene bis(phenylisocyanate)

US. Rhode Island RTK

Chemical Identity

Butyl benzyl phthalate
4,4'-Methylene bis(phenylisocyanate)

Other Regulations:

Regulatory VOC (less water and exempt solvent):	21 g/l
VOC Method 310:	2.00 %

Inventory Status:

Australia AICS:	One or more components in this product are not listed on or exempt from the Inventory.
Canada DSL Inventory List:	One or more components in this product are not listed on or exempt from the Inventory.
EINECS, ELINCS or NLP:	One or more components in this product are not listed on or exempt from the Inventory.
Japan (ENCS) List:	One or more components in this product are not listed on or exempt from the Inventory.
China Inv. Existing Chemical Substances:	One or more components in this product are not listed on or exempt from the Inventory.
Korea Existing Chemicals Inv. (KECI):	One or more components in this product are not listed on or exempt from the Inventory.
Canada NDSL Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Philippines PICCS:	One or more components in this product are not listed on or exempt from the Inventory.

US TSCA Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
New Zealand Inventory of Chemicals:	One or more components in this product are not listed on or exempt from the Inventory.
Japan ISHL Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Japan Pharmacopoeia Listing:	One or more components in this product are not listed on or exempt from the Inventory.

16. Other information, including date of preparation or last revision
--

Revision Date:	08/13/2015
Version #:	1.0
Further Information:	No data available.
Disclaimer:	For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.