

1. Product and Company Identification

Material name ReflectWrap 1502
Version # 01
Issue date 04-15-2013
Revision date -
Supersedes date -
CAS # Mixture
Product use Polyester Fabric/Foil-Polyester Laminate.
Manufacturer/Supplier Federal-Mogul World Headquarters
 26555 Northwestern Highway
 Southfield, Michigan 48033
 USA
 Contact Person: MSDS Request (voicemail) 1-248-354-9844

Emergency 24hr EP (INFOTRAC): 1-800-535-5053
 International: (001) 352-323-3500
 Non-emergency Telephone: 1-248-354-9844

2. Hazards Identification

Physical state Solid.
Appearance Aluminized White Fabric
Emergency overview Under normal conditions of processing and use, exposure to the chemical constituents in this product is unlikely. Used as intended, this product is not expected to generate potentially hazardous quantities of dust or fumes.
OSHA regulatory status This product is not hazardous according to OSHA 29CFR 1910.1200.
Potential health effects
 Routes of exposure Not relevant, due to the form of the product in its manufactured and shipped state.
 Eyes No adverse effects due to eye contact are expected.
 Skin No adverse effects due to skin contact are expected.
 Inhalation No adverse effects due to inhalation are expected.
 Ingestion Not relevant, due to the form of the product.
Chronic effects Not relevant, due to the form of the product.
Signs and symptoms Not relevant, due to the form of the product.
Potential environmental effects Not relevant, due to the form of the product in its manufactured and shipped state.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Urethane Adhesive	51-79-6	12 - 16
Aluminum Foil	7429-90-5	10 - 15

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
 The urethane adhesive is used to adhere the polyester to the aluminum foil so it is not bound within the sleeve.

4. First Aid Measures

First aid procedures
 Eye contact No specific first aid measures noted. However, immediately flush with plenty of water for at least 15 minutes.
 Skin contact No adverse effects due to skin contact.

Inhalation	No specific first aid measures noted.
Ingestion	No adverse effects due to ingestion are expected.
Notes to physician	Treat symptomatically.
General advice	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Flammable properties	This product is not flammable. Will burn if involved in a fire.
Extinguishing media	
Suitable extinguishing media	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	None.
Protection of firefighters	
Specific hazards arising from the chemical	Material is above its flash point in molten state. Flammable vapors can accumulate before the material reaches its melting point.
Protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Use standard firefighting procedures and consider the hazards of other involved materials.
Hazardous combustion products	Aluminum oxides. Nitrogen oxides. Toxic fumes.

6. Accidental Release Measures

Personal precautions	Used as intended, this product is not expected to generate potentially hazardous quantities of dust or fumes. See Section 8 of the MSDS for Personal Protective Equipment.
Environmental precautions	No special environmental precautions required.
Methods for containment	Collect and dispose of spillage as indicated in Section 13 of the MSDS.
Methods for cleaning up	No specific precautions.

7. Handling and Storage

Handling	Normal handling and use of this product should not generate dust or fumes. Observe good industrial hygiene practices.
Storage	Store in closed original container in a dry place.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Aluminum Foil (CAS 7429-90-5)	TWA	1 mg/m3	Respirable fraction.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Aluminum Foil (CAS 7429-90-5)	PEL	5 mg/m3	Respirable dust.
		15 mg/m3	Total dust.

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
Aluminum Foil (CAS 7429-90-5)	TWA	5 mg/m3	Pyrophoric powder.
		10 mg/m3	Dust.

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
Aluminum Foil (CAS 7429-90-5)	TWA	1 mg/m3	Respirable.

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
Aluminum Foil (CAS 7429-90-5)	TWA	1 mg/m3	Respirable fraction.

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value	Form
Aluminum Foil (CAS 7429-90-5)	TWA	5 mg/m3 10 mg/m3	Welding fume.

Mexico. Occupational Exposure Limit Values

Components	Type	Value	Form
Aluminum Foil (CAS 7429-90-5)	TWA	5 mg/m3 5 mg/m3 10 mg/m3	Pyrophoric powder. Welding fume. Dust.

Engineering controls Used as intended, this product is not expected to generate potentially hazardous quantities of dust or fumes. No special control measures are required for the normal handling and dispensing of this medication.

Personal protective equipment

Eye / face protection No special precautions.

Skin protection No skin protection is ordinarily required under normal conditions of use.

Respiratory protection No protection is ordinarily required under normal conditions of use and with adequate ventilation.

General hygiene considerations Wash hands after handling.

9. Physical & Chemical Properties

Appearance Aluminized White Fabric

Physical state Solid.

Form Solid.

Color No data available.

Odor Odorless.

Odor threshold Not applicable.

pH Not applicable.

Vapor pressure Not applicable.

Vapor density Not applicable.

Boiling point Not applicable.

Melting point/Freezing point > 399.2 °F (> 204 °C)

Solubility (water) Not applicable.

Specific gravity Not available.

Flash point > 482.0 °F (> 250.0 °C) Closed Cup

Flammability limits in air, upper, % by volume Not available.

Flammability limits in air, lower, % by volume Not available.

Auto-ignition temperature Not available.

Viscosity Not applicable.

Partition coefficient
(n-octanol/water) Not applicable.

10. Chemical Stability & Reactivity Information

Chemical stability Material is stable under normal conditions.
Conditions to avoid No special precautions.
Incompatible materials None known.
Hazardous decomposition products Aluminum oxides. Nitrogen oxides. Toxic fumes.
Possibility of hazardous reactions Will not occur.

11. Toxicological Information

Toxicological data

Components	Species	Test Results
Urethane Adhesive (CAS 51-79-6)		
Acute		
Oral		
LD50	Rat	1809 mg/kg
Sensitization	Not a skin sensitizer.	
Acute effects	Used as intended, this product is not expected to generate potentially hazardous quantities of dust or fumes.	
Chronic effects	Not relevant, due to the form of the product.	
Carcinogenicity	The ingredient is bound within the aluminized polyester sleeve and release is not expected.	
ACGIH Carcinogens		
Aluminum Foil (CAS 7429-90-5)	A4 Not classifiable as a human carcinogen.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Urethane Adhesive (CAS 51-79-6)	2A Probably carcinogenic to humans.	
US NTP Report on Carcinogens: Anticipated carcinogen		
Urethane Adhesive (CAS 51-79-6)	Reasonably Anticipated to be a Human Carcinogen.	
Mutagenicity	Not relevant, due to the form of the product.	
Reproductive effects	Not relevant, due to the form of the product.	
Symptoms and target organs	Not relevant, due to the form of the product.	
Further information	Not relevant, due to the form of the product.	

12. Ecological Information

Ecotoxicological data

Components	Species	Test Results
Urethane Adhesive (CAS 51-79-6)		
Aquatic		
Fish	LC50	Fathead minnow (Pimephales promelas) 4961 - 5541 mg/l, 96 hours
Ecotoxicity	Not relevant, due to the form of the product in its manufactured and shipped state.	
Persistence and degradability	Not relevant.	
Bioaccumulation / Accumulation	Not relevant.	
Partition coefficient		
Urethane Adhesive (CAS 51-79-6)	-0.15	
Mobility in environmental media	Not relevant, due to the form of the product.	

13. Disposal Considerations

Waste codes

US RCRA Hazardous Waste U List: Reference

Urethane Adhesive (CAS 51-79-6)

U238

Disposal instructions

Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

Waste from residues / unused products

Dispose of waste and residues in accordance with local authority requirements.

Contaminated packaging

Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport Information

DOT

Not regulated as a hazardous material by DOT.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

TDG

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations

This product is not hazardous according to OSHA 29CFR 1910.1200.

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

Urethane Adhesive (CAS 51-79-6)

0.1 % One-Time Export Notification only.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Urethane Adhesive (CAS 51-79-6)

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

Aluminum Foil (CAS 7429-90-5)

1.0 %

Urethane Adhesive (CAS 51-79-6)

0.1 %

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Aluminum Foil (CAS 7429-90-5)

Listed.

Urethane Adhesive (CAS 51-79-6)

Listed.

CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)

Urethane Adhesive: 100

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance (40 CFR 355, Appendix A)

No

SARA 311/312 Hazardous chemical

No

Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)

Not controlled

Canadian regulations

This product has been classified according to the hazard criteria of the Canadian Controlled Products Regulations, Section 33, and the MSDS contains all required information.

WHMIS status

Non-controlled

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US - California Hazardous Substances (Director's): Listed substance

Aluminum Foil (CAS 7429-90-5)	Listed.
Urethane Adhesive (CAS 51-79-6)	Listed.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Urethane Adhesive (CAS 51-79-6)	Listed.
---------------------------------	---------

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Urethane Adhesive (CAS 51-79-6)	Listed: January 1, 1988 Carcinogenic.
---------------------------------	---------------------------------------

US - California Proposition 65 - CRT: Listed date/Developmental toxin

Urethane Adhesive (CAS 51-79-6)	Listed: October 1, 1994 Developmental toxin.
---------------------------------	--

US - New Jersey RTK - Substances: Listed substance

Aluminum Foil (CAS 7429-90-5)	Listed.
Urethane Adhesive (CAS 51-79-6)	Listed.

US - Pennsylvania RTK - Hazardous Substances: Special hazard

Urethane Adhesive (CAS 51-79-6)	Special hazard.
---------------------------------	-----------------

US. Massachusetts RTK - Substance List

Aluminum Foil (CAS 7429-90-5)	Listed.
Urethane Adhesive (CAS 51-79-6)	Listed.

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

Aluminum Foil (CAS 7429-90-5)	500 lbs
Urethane Adhesive (CAS 51-79-6)	500 lbs

US. Pennsylvania RTK - Hazardous Substances

Aluminum Foil (CAS 7429-90-5)	Listed.
Urethane Adhesive (CAS 51-79-6)	Listed.

16. Other Information

Further information HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings
Health: 0
Flammability: 0
Physical hazard: 0

NFPA ratings
Health: 0
Flammability: 0
Instability: 0

Disclaimer The information provided on this data sheet was abstracted from supplier material safety data sheets and standard references in occupational health and toxicology. Federal-Mogul makes no representation or warranty with respect to the information obtained from such references. The information is however, as of the date provided, true and accurate to the best of Federal-Mogul's knowledge, and should be used to make an independent determination of the methods to safeguard workers and the environment.