

Safety Data Sheet

Firestone Fibers and Textiles Company

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name	• F-62 and WV-62
Synonyms	• RP16648
Product Code	• FS-002

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified use(s)	• Tire cord adhesion component
-----------------------------------	--------------------------------

1.3 Details of the supplier of the safety data sheet

Manufacturer	• Firestone Fibers and Textiles Company 100 Firestone Lane King's Mountain, NC 28086 United States FSFT-CustomerService@bfusa.com
---------------------	---

1.4 Emergency telephone number

Manufacturer	• 800-424-9300 - CHEMTREC
---------------------	---------------------------

Section 2: Hazards Identification

EU/EEC

According to Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]
According to EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture

CLP	• Acute Toxicity Oral 4 - H302 Skin Irritation 2 - H315 Eye Irritation 2 - H319
DSD/DPD	• Harmful (Xn) R22

2.2 Label Elements

CLP

WARNING

Hazard statements	• H302 - Harmful if swallowed H315 - Causes skin irritation H319 - Causes serious eye irritation
--------------------------	--

Precautionary statements

Prevention	• P264 - Wash thoroughly after handling. P270 - Do not eat, drink or smoke when using this product.
-------------------	--

- Response**
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 - P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
 - P362 - Take off contaminated clothing and wash before reuse.
 - P332+P313 - If skin irritation occurs: Get medical advice/attention.
 - P321 - Specific treatment, see supplemental first aid information.
 - P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P337+P313 - If eye irritation persists: Get medical advice/attention.
 - P301+P312 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician if you feel unwell.
 - P330 - Rinse mouth.

- Storage/Disposal**
- P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

- Supplemental information**
- <38 percent of this product consists of an ingredient of unknown toxicity.

DSD/DPD



- Risk phrases**
- R22 - Harmful if swallowed.

2.3 Other Hazards

- CLP**
- According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.
- DSD/DPD**
- According to European Directive 1999/45/EC this material is considered dangerous.

United States (US)

According to OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

- OSHA HCS 2012**
- Acute Toxicity Oral 4 - H302
 - Skin Irritation 2 - H315
 - Eye Irritation 2 - H319

2.2 Label elements

OSHA HCS 2012

WARNING



- Hazard statements**
- Harmful if swallowed - H302
 - Causes skin irritation - H315
 - Causes serious eye irritation - H319

Precautionary statements

- Prevention**
- Wash thoroughly after handling. - P264
 - Do not eat, drink or smoke when using this product. - P270
 - Wear protective gloves/protective clothing/eye protection/face protection. - P280
- Response**
- IF ON SKIN: Wash with plenty of soap and water. - P302+P352
 - Specific treatment, see supplemental first aid information. - P321
 - If skin irritation occurs: Get medical advice/attention. - P332+P313
 - Take off contaminated clothing and wash before reuse. - P362
 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. - P305+P351+P338
 - If eye irritation persists: Get medical advice/attention. - P337+P313
 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician if you feel unwell. - P301+P312
 - Rinse mouth. - P330

Storage/Disposal • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. - P501

Supplemental information • <38 percent of this product consists of an ingredient of unknown toxicity.

2.3 Other hazards

OSHA HCS 2012

- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Canada

According to WHMIS

2.1 Classification of the substance or mixture

WHMIS

- Toxic - D1B
- Other Toxic Effects - D2B

2.2 Label elements

WHMIS



- Toxic - D1B
- Other Toxic Effects - D2B

2.3 Other hazards

WHMIS

- In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

See Section 12 for Ecological Information.

Section 3 - Composition/Information on Ingredients

3.1 Substances

- Material does not meet the criteria of a substance in accordance with Regulation (EC) No 1272/2008.

3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Hydrocarbon resin	NDA	< 38%	NDA	EU DSD/DPD: Data Lacking EU CLP: Data Lacking OSHA HCS 2012: Data Lacking	NDA
Resorcinol	CAS:108-46-3 EC Number:203-585-2	< 17%	Ingestion/Oral-Rat LD50 • 301 mg/kg Skin-Rabbit LD50 • 3360 mg/kg	EU DSD/DPD: Annex I: Xn; R22 Xi; R36/38 N; R50 EU CLP: Annex VI: Acute Tox. 4, H302; Eye Irrit. 2, H319; Skin Irrit. 2, H315; Aquatic Acute 1, H400 OSHA HCS 2012: Eye Irrit. 2A; Skin Irrit. 2; Acute Tox. 3 (Oral)	NDA

See Section 11 for Toxicological Information.

Section 4 - First Aid Measures

4.1 Description of first aid measures

- Inhalation**
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. If signs/symptoms continue, get medical attention.
- Skin**
- In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Take off contaminated clothing and wash before reuse. If irritation develops and persists, get medical attention.
- Eye**
- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.
- Ingestion**
- Do not use mouth-to-mouth method if victim ingested the substance. Get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to Physician**
- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5 - Firefighting Measures

5.1 Extinguishing media

- Suitable Extinguishing Media**
- Water, carbon dioxide, or dry chemical.
- Unsuitable Extinguishing Media**
- No data available.

5.2 Special hazards arising from the substance or mixture

- Unusual Fire and Explosion Hazards**
- Containers may explode when heated.
- Hazardous Combustion Products**
- Carbon and sulfur oxides, acrid smoke and fumes. Resorcinol, formaldehyde, hydrogen sulfide may be released at high temperatures.

5.3 Advice for firefighters

- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.
Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.
Wear positive pressure self-contained breathing apparatus (SCBA).

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

- Personal Precautions**
- Do not walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid contact with skin, eyes, and clothing. Ventilate enclosed areas.
- Emergency Procedures**
- As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. Keep unauthorized personnel away. Ventilate closed spaces before entering.

6.2 Environmental precautions

- Avoid run off to waterways and sewers.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures

- Stop leak if you can do it without risk.
SMALL SPILLS: Take up with sand or other non-combustible absorbent material and place into containers for later disposal.
LARGE SPILLS: Dike far ahead of spill for later disposal.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage**7.1 Precautions for safe handling****Handling**

- Use only with adequate ventilation. Wear appropriate personal protective equipment, avoid direct contact. Avoid breathing mist, vapours, spray. Avoid contact with skin, eyes, and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

7.2 Conditions for safe storage, including any incompatibilities**Storage**

- Keep container tightly closed. Store in a cool, dry, well-ventilated place.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection**8.1 Control parameters**

Exposure Limits/Guidelines						
	Result	ACGIH	Canada Alberta	Canada British Columbia	Canada Manitoba	Canada New Brunswick
Resorcinol (108-46-3)	STELs	20 ppm STEL	20 ppm STEL; 90 mg/m ³ STEL	20 ppm STEL	20 ppm STEL	20 ppm STEL; 90 mg/m ³ STEL
	TWAs	10 ppm TWA	10 ppm TWA; 45 mg/m ³ TWA	10 ppm TWA	10 ppm TWA	10 ppm TWA; 45 mg/m ³ TWA
Exposure Limits/Guidelines (Con't.)						
	Result	Canada Northwest Territories	Canada Nova Scotia	Canada Nunavut	Canada Ontario	Canada Quebec
Resorcinol (108-46-3)	STELs	20 ppm STEL; 90 mg/m ³ STEL	20 ppm STEL	20 ppm STEL; 90 mg/m ³ STEL	20 ppm STEL	20 ppm STEV; 90 mg/m ³ STEV
	TWAs	10 ppm TWA; 45 mg/m ³ TWA	10 ppm TWA	10 ppm TWA; 45 mg/m ³ TWA	10 ppm TWA	10 ppm TWAEV; 45 mg/m ³ TWAEV
Exposure Limits/Guidelines (Con't.)						
	Result	Canada Saskatchewan	Canada Yukon	Europe	NIOSH	
Resorcinol (108-46-3)	TWAs	10 ppm TWA	10 ppm TWA; 45 mg/m ³ TWA	10 ppm TWA; 45 mg/m ³ TWA	10 ppm TWA; 45 mg/m ³ TWA	
	STELs	Not established	20 ppm STEL; 90 mg/m ³ STEL	Not established	20 ppm STEL; 90 mg/m ³ STEL	

8.2 Exposure controls**Engineering Measures/Controls**

- Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values.

Personal Protective Equipment**Respiratory**

- Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European

Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Wear chemical splash safety goggles.

Skin/Body

- Wear appropriate gloves.

Environmental Exposure Controls

- Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways. Follow best practice for site management and disposal of waste.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

NIOSH = National Institute of Occupational Safety and Health

OSHA = Occupational Safety and Health Administration

STEL = Short Term Exposure Limits are based on 15-minute exposures

STEV = Short Term Exposure Value

TWAEV = Time-Weighted Average Exposure Value

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

Section 9 - Physical and Chemical Properties**9.1 Information on Physical and Chemical Properties**

Material Description			
Physical Form	Liquid	Appearance/Description	Red/brown liquid with a rotten egg odor.
Color	Red/Brown	Odor	Rotten egg.
Odor Threshold	Data lacking		
General Properties			
Boiling Point	100 C(212 F)	Melting Point	Data lacking
Decomposition Temperature	Data lacking	pH	3.74
Specific Gravity/Relative Density	1.165 Water=1	Water Solubility	Soluble
Viscosity	30 Centipoise (cPs, cP) or mPas	Explosive Properties	Data lacking
Oxidizing Properties:	Data lacking		
Volatility			
Vapor Pressure	Data lacking	Vapor Density	Data lacking
Evaporation Rate	Data lacking		
Flammability			
Flash Point	Data lacking	UEL	Data lacking
LEL	Data lacking	Autoignition	Data lacking
Flammability (solid, gas)	Data lacking		
Environmental			
Octanol/Water Partition coefficient	Data lacking		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity**10.1 Reactivity**

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

- Incompatible materials.

10.5 Incompatible materials

- Acids, alkalies, strong oxidizers.

10.6 Hazardous decomposition products

- Carbon and sulfur oxides, acrid smoke and fumes. Resorcinol, formaldehyde, hydrogen sulfide may be released at high temperatures.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Component Name	CAS	Data
Resorcinol (< 17%)	108-46-3	Acute Toxicity: orl-rat LD50:301 mg/kg; skn-rbt LDLo:3360 mg/kg; Irritation: skn-rbt 20 mg/24H MOD; Tumorigen/Carcinogen: skn-mus TDL0:4800 mg/kg/12W-I
GHS Properties		Classification
Acute toxicity		EU/CLP • Acute Toxicity - Oral 4 - ATEmix (oral) =1097.764706 OSHA HCS 2012 • Acute Toxicity - Oral 4 - ATEmix (oral) =1097.764706
Aspiration Hazard		EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Carcinogenicity		EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Germ Cell Mutagenicity		EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Skin corrosion/Irritation		EU/CLP • Skin Irritation 2 OSHA HCS 2012 • Skin Irritation 2
Skin sensitization		EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
STOT-RE		EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
STOT-SE		EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Toxicity for Reproduction		EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Respiratory sensitization		EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Serious eye damage/Irritation		EU/CLP • Eye Irritation 2 OSHA HCS 2012 • Eye Irritation 2

Route(s) of entry/exposure

- Inhalation, Skin, Eye, Ingestion

Potential Health Effects

Inhalation

Acute (Immediate)

- May cause irritation.

- Chronic (Delayed)**
 - No data available.
- Skin**
- Acute (Immediate)**
 - Causes skin irritation.
- Chronic (Delayed)**
 - No data available.
- Eye**
- Acute (Immediate)**
 - Causes serious eye irritation.
- Chronic (Delayed)**
 - No data available.
- Ingestion**
- Acute (Immediate)**
 - Harmful if swallowed.
- Chronic (Delayed)**
 - No data available.

Key to abbreviations

- LD = Lethal Dose
- MOD = Moderate
- TD = Toxic Dose

Section 12 - Ecological Information

12.1 Toxicity

- Material data lacking.

12.2 Persistence and degradability

- Material data lacking.

12.3 Bioaccumulative potential

- Material data lacking.

12.4 Mobility in Soil

- Material data lacking.

12.5 Results of PBT and vPvB assessment

- No PBT and vPvB assessment has been conducted.

12.6 Other adverse effects

- No studies have been found.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

- Product waste**
 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.
- Packaging waste**
 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	NDA	Not Regulated	NDA	NDA	NDA

TDG	NDA	Not Regulated	NDA	NDA	NDA
IMO/IMDG	NDA	Not Regulated	NDA	NDA	NDA
ADN	NDA	Not Regulated	NDA	NDA	NDA
ADR/RID	NDA	Not Regulated	NDA	NDA	NDA
IATA/ICAO	NDA	Not Regulated	NDA	NDA	NDA

14.6 Special precautions for user • None known.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code • Not relevant.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications • Acute

State Right To Know				
Component	CAS	MA	NJ	PA
Resorcinol	108-46-3	Yes	Yes	Yes

Inventory						
Component	CAS	Canada DSL	Canada NDSL	EU EINECS	EU ELNICS	Korea KECL
Resorcinol	108-46-3	Yes	No	Yes	No	Yes

Inventory (Con't.)		
Component	CAS	TSCA
Resorcinol	108-46-3	Yes

Canada

Labor

Canada - WHMIS - Classifications of Substances

• Resorcinol 108-46-3 D1B, D2B

Canada - WHMIS - Ingredient Disclosure List

• Resorcinol 108-46-3 1 %

Environment

Canada - 2004 NPRI (National Pollutant Release Inventory)

• Resorcinol 108-46-3 Not Listed

Canada - 2005 NPRI (National Pollutant Release Inventory)

• Resorcinol 108-46-3 Not Listed

Canada - CEPA - Greenhouse Gases Subject to Mandatory Reporting

• Resorcinol 108-46-3 Not Listed

Canada - CEPA - Priority Substances List

• Resorcinol 108-46-3 Not Listed

Canada - DWQ (Drinking Water Quality) - IMACs		
• Resorcinol	108-46-3	Not Listed

Other		
Canada - Accelerated Reduction/Elimination of Toxics (ARET)		
• Resorcinol	108-46-3	Not Listed

Canada New Brunswick

Environment		
Canada - New Brunswick - Ozone Depleting Substances - Schedule A		
• Resorcinol	108-46-3	Not Listed
Canada - New Brunswick - Ozone Depleting Substances - Schedule B		
• Resorcinol	108-46-3	Not Listed

Europe

Other		
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification		
• Resorcinol	108-46-3	Xn; R22 Xi; R36/38 N; R50
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits		
• Resorcinol	108-46-3	10%≤C: Xn; R:22
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling		
• Resorcinol	108-46-3	Xn N R:22-36/38-50 S:(2)-26-61
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations		
• Resorcinol	108-46-3	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases		
• Resorcinol	108-46-3	S:(2)-26-61

Mexico

Other		
Mexico - Hazard Classifications		
• Resorcinol	108-46-3	Hazard Class = 6.1 PG = III UN2876
Mexico - Regulated Substances		
• Resorcinol	108-46-3	UN2876

United States

Labor		
U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals		
• Resorcinol	108-46-3	Not Listed
U.S. - OSHA - Specifically Regulated Chemicals		
• Resorcinol	108-46-3	Not Listed

Environment		
U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants		

• Resorcinol	108-46-3	Not Listed
U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities		
• Resorcinol	108-46-3	5000 lb final RQ; 2270 kg final RQ
U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities		
• Resorcinol	108-46-3	Not Listed
U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs		
• Resorcinol	108-46-3	Not Listed
U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs		
• Resorcinol	108-46-3	Not Listed
U.S. - CERCLA/SARA - Section 313 - Emission Reporting		
• Resorcinol	108-46-3	Not Listed
U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing		
• Resorcinol	108-46-3	Not Listed
U.S. - RCRA (Resource Conservation & Recovery Act) - Hazardous Constituents - Appendix VIII to 40 CFR 261		
• Resorcinol	108-46-3	waste number U201
U.S. - RCRA (Resource Conservation & Recovery Act) - U Series Wastes - Acutely Toxic Wastes & Other Hazardous Characteristics		
• Resorcinol	108-46-3	waste number U201

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List		
• Resorcinol	108-46-3	Not Listed
U.S. - California - Proposition 65 - Developmental Toxicity		
• Resorcinol	108-46-3	Not Listed
U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)		
• Resorcinol	108-46-3	Not Listed
U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)		
• Resorcinol	108-46-3	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Female		
• Resorcinol	108-46-3	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Male		
• Resorcinol	108-46-3	Not Listed

United States - Pennsylvania

Labor

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List		
• Resorcinol	108-46-3	
U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances		
• Resorcinol	108-46-3	Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

Section 16 - Other Information

- | | |
|--|--|
| Last Revision Date | <ul style="list-style-type: none">● 18/November/2013 |
| Preparation Date | <ul style="list-style-type: none">● 02/March/2009 |
| Disclaimer/Statement of Liability | <ul style="list-style-type: none">● The information contained herein is based on data considered accurate which has been obtained from other companies and organizations. However, no warranty or representation is expressed or implied that the information, is accurate, complete or representative. Firestone Fibers and Textiles Company, a subsidiary of Bridgestone Americas Holding, Inc. assumes no responsibility for injury to the buyer, the buyer's employees, or any third persons, if reasonable safety procedures are not followed. Additionally, Firestone Fibers and Textiles Company assumes no responsibility for injury to buyer, the buyer's employees, or any third persons caused by abnormal use of this material, even if reasonable safety procedures are followed. |

Key to abbreviations

NDA = No Data Available