

1. Product and Company Identification

Product identifier	FS20000 - LUBRICITY ENHANCING FUEL FILTER
Other means of identification	
MSDS number	LT16617
Product code	FS20000
Product use	Lubricity enhancing fuel filter.
Chemical family	Article. This product is considered to be a 'manufactured article'.
Manufacturer	
Company name	Cummins Filtration
Address	1200 Fleetguard Road Cookeville, TN, U.S.A. 38506
Telephone	(931) 526 9551
Website	www.cumminsfiltration.com
E-Mail	fleetmaster.us@cummins.com
Supplier information	Refer to Manufacturer
Emergency phone number	Chemtrec 1-800-424-9300 (Within Continental U.S.); Chemtrec 703-527-3887 (Outside U.S.).

2. Hazard(s) Identification

Emergency overview	<p>Solid article. No odour.</p> <p>No hazards resulting from the material as supplied. This product is considered to be a 'manufactured article'. Under normal conditions of use, users of the product cannot be exposed to its harmful contents.</p> <p>However, if the article is damaged and/or improperly used:</p> <p>If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract. May cause gastrointestinal irritation. Direct eye contact may cause slight or mild, transient irritation. Direct skin contact may cause slight or mild, transient irritation.</p>
Potential health effects	
Routes of exposure	Inhalation; Skin contact; Eye contact
Routes of entry skin & eye	Causes little or no irritation.
Routes of entry skin absorption	Not expected to be absorbed through the skin.
Routes of entry inhalation	If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract.
Routes of entry ingestion	Not an expected route of entry.
Target organs	Eyes, skin, respiratory system.
Chronic effects	<p>This product is considered to be a 'manufactured article'. Under normal conditions of use, users of the product cannot be exposed to its harmful contents. However, if the article is damaged and/or improperly used:</p> <p>Prolonged or repeated contact may cause drying, cracking and defatting of the skin.</p>
Most important symptoms/effects, acute and delayed	<p>This product is considered to be a 'manufactured article'. Under normal conditions of use, users of the product cannot be exposed to its harmful contents.</p> <p>If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract. Symptoms may include upper respiratory irritation, coughing and breathing difficulties.</p> <p>If material is ingested, may cause irritation to mucous membranes. May cause nausea, vomiting, and diarrhea.</p> <p>Direct eye contact may cause slight or mild, transient irritation. Symptoms may include stinging and tearing.</p> <p>Direct skin contact may cause slight or mild, transient irritation. Direct skin contact may cause temporary redness.</p>
Potential environmental effects	See ECOLOGICAL INFORMATION, Section 12.

3. Composition/information on ingredients

Solid article. Solid filter assembly.

Chemical name	CAS #	Percent
Tall oil fatty acid	Not reported	40.0 - 70.0
Polymer	Not reported	30.0 - 60.0

4. First Aid Measures

First aid procedures

Inhalation	None required under normal conditions. However, if the article is damaged and/or improperly used: If inhaled, move to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing has stopped, give artificial respiration. Get medical attention if irritation develops and persists.
Skin contact	None required under normal conditions. However, if the article is damaged and/or improperly used: For skin contact, wash with soap and water while removing contaminated clothing. Get medical attention if irritation develops and persists.
Eye contact	None required under normal conditions. However, if the article is damaged and/or improperly used: Rinse thoroughly with plenty of water, also under the eyelids. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.
Ingestion	Not considered to be a hazard. If ingested, do not induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Obtain medical attention if symptoms develop and persist.

Notes to physician

Provide general supportive measures and treat symptomatically.

General Information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire Fighting Measures

Flammable properties Not flammable by WHMIS criteria.

Extinguishing media

Suitable extinguishing media	Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical.
Unsuitable extinguishing media	None known.

Protection of firefighters

Specific hazards arising from the chemical Toxic fumes may be released during a fire. The pressure in sealed containers can increase under the influence of heat.

Protective equipment for firefighters Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

Fire fighting equipment/instructions Move containers from fire area if safe to do so. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

Explosion data

Sensitivity to static discharge Not expected to be sensitive to static discharge.

Sensitivity to mechanical impact Not expected to be sensitive to mechanical impact.

Hazardous combustion products Carbon oxides; Aldehydes; Acids; irritating fumes and smoke.

General fire hazards Not classified as flammable.

6. Accidental Release Measures

Personal precautions Keep people away from and upwind of spill/leak. Wear appropriate protective equipment. Refer to protective measures listed in sections 7 and 8.

Environmental precautions Prevent product from entering drains, sewers, waterways and soil.

Methods and materials for containment and cleaning up Ventilate the area. Remove all sources of ignition. Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labelled containers. Contact the proper local authorities. For spilled liquids: absorb spill with inert, non-combustible material such as sand, then place into suitable containers. For waste disposal, see Section 13 of the SDS.

Other information Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling Use with adequate ventilation. Wear suitable protective equipment during handling. Avoid breathing dust, fume or vapors. Avoid contact with skin, eyes and clothing. Keep away from extreme heat and direct flame. Keep away from incompatibles. Wash thoroughly after handling.

Storage Store in cool/well-ventilated place. Inspect periodically for damage or leaks. Do not store near any incompatible materials (see Section 10).

8. Exposure Controls / Personal Protection

Occupational exposure limits

No exposure limits noted for the ingredient(s).

Biological limit values

No biological exposure limits noted for the ingredient(s).

Engineering controls

Ensure adequate ventilation, especially in confined areas. Local exhaust ventilation is preferred to prevent contaminant dispersion into work area. In case of insufficient ventilation wear suitable respiratory equipment.

Personal protective equipment

Eye / face protection

None required when used as intended. If contact is likely, safety glasses with side shields are recommended.

Skin protection

None required when used as intended. For prolonged or repeated contact use protective gloves. Advice should be sought from glove suppliers. Wear sufficient clothing to prevent skin contact.

Respiratory protection

If airborne concentrations are above the permissible exposure limit or are not known, use NIOSH-approved respirators. Advice should be sought from respiratory protection specialists.

Other protection

Ensure that eyewash stations and safety showers are close to the workstation location. Other equipment may be required depending on workplace standards.

9. Physical and chemical properties

Appearance

Physical state Solid article.

Form Solid filter assembly.

Colour Tan solid material

Odour No odour.

Odour threshold N/Av

pH N/Av



MATERIAL SAFETY DATA SHEET

Melting point /freezing point N/Av
Initial boiling point and boiling range N/Av
Flash point > 204°C (400°F) (estimated)
 N/Av
Evaporation rate N/Av
Flammability (solid, gas) Not considered flammable.
Lower flammability/explosive limit N/Av

Upper flammability/explosive limit N/Av
Vapour pressure N/Av
Vapour density N/Av
Relative density N/Av
Solubility(ies)
 Other solubility(ies) N/Av
 Solubility (water) Insoluble.
Partition coefficient (n-octanol/water) N/Av
Auto-ignition temperature N/Av
Decomposition temperature N/Av
Viscosity N/Av

Other information

Explosive properties Not explosive
Oxidizing properties None known.
Specific gravity N/Av
VOC N/Av
Volatilities % N/Av
Other physical/chemical data No additional information.

10. Stability and reactivity

Reactivity Not normally reactive.
Chemical stability Stable under normal conditions.
Possibility of hazardous reactions Hazardous polymerization does not occur. No dangerous reaction known under conditions of normal use.
Conditions to avoid Direct sources of heat. Do not use in areas without adequate ventilation. Avoid contact with incompatible materials.
Incompatible materials Strong oxidizing agents; Strong bases; Reducing agents
Hazardous decomposition products None known, refer to hazardous combustion products in Section 5.

11. Toxicological information

Toxicological data

Components	Species	Test Results
Tall oil fatty acid Acute <i>Dermal</i> LD50	Rabbit	> 2000 mg/kg (supplier)

Polymer	<i>inhalation</i>		
	LC50	Rat	N/Av
	<i>Oral</i>		
	LD50	Rat	> 5000 mg/kg (supplier)
	Acute		
	<i>Dermal</i>		
	LD50	Rabbit	N/Av
	<i>inhalation</i>		
	LC50	Rat	N/Av
	<i>Oral</i>		
LD50	Rat	N/Av	

Acute effects This product is considered to be a 'manufactured article'. Under normal conditions of use, users of the product cannot be exposed to its harmful contents. However, if the article is damaged and/or improperly used:
If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract. May cause gastrointestinal irritation. Direct eye contact may cause slight or mild, transient irritation. Direct skin contact may cause slight or mild, transient irritation.
See data above for individual ingredient acute toxicity data.

Senitization Not expected to be a skin or respiratory sensitizer.

Chronic effects This product is considered to be a 'manufactured article'. Under normal conditions of use, users of the product cannot be exposed to its harmful contents. However, if the article is damaged and/or improperly used:
Prolonged or repeated contact may cause drying, cracking and defatting of the skin.

Carcinogenicity No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

Skin corrosion/irritation Direct skin contact may result in little or no irritation.

Serious eye damage/irritation Causes little or no irritation.

Mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Reproductive effects Not expected to cause reproductive effects.

Teratogenicity Not expected to be a teratogen.

Most important symptoms/effects, acute and delayed This product is considered to be a 'manufactured article'. Under normal conditions of use, users of the product cannot be exposed to its harmful contents.
If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract. Symptoms may include upper respiratory irritation, coughing and breathing difficulties.
If material is ingested, may cause irritation to mucous membranes. May cause nausea, vomiting, and diarrhea.
Direct eye contact may cause slight or mild, transient irritation. Symptoms may include stinging and tearing.
Direct skin contact may cause slight or mild, transient irritation. Direct skin contact may cause temporary redness.

Further information None known or reported by the manufacturer.

12. Ecological information

Ecotoxicity data:				
Components	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Tall oil fatty acid	Not reported	N/Av	N/Av	N/Av
Polymer	Not reported	N/Av	N/Av	N/Av

Components	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Tall oil fatty acid	Not reported	N/Av	N/Av	N/Av
Polymer	Not reported	N/Av	N/Av	N/Av

Components	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Tall oil fatty acid	Not reported	N/Av	N/Av	N/Av
Polymer	Not reported	N/Av	N/Av	N/Av

Ecotoxicity No data is available on the product itself. See above for individual ingredient ecotoxicity data.

Environmental effects An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.

Aquatic toxicity No data is available on the product itself.

Persistence and degradability No data is available on the product itself.

Bioaccumulation / accumulation The product itself has not been tested.

Mobility in soil The product itself has not been tested.

13. Disposal consideration

Disposal instructions Handle waste according to recommendations in Section 7.

Waste from residues / unused products Dispose of contents/container in accordance with local regulation.

Contaminated packaging Empty containers should be taken for local recycling or waste disposal.

14. Transport information

TDG	Not regulated as dangerous goods
ICAO/IATA	Not regulated as dangerous goods
IMDG	Not regulated as dangerous goods

General information Appropriate advice on safety must accompany the package. This product does not meet the criteria for an environmentally hazardous mixture, according to the IMDG Code. See Section 12 for more environmental information.

15. Regulatory information

Canadian regulations Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and this MSDS contains all the information required by the CPR.

WHMIS status This product is not a WHMIS controlled product in Canada. This product is considered to be a 'manufactured article'.



MATERIAL SAFETY DATA SHEET

International Inventories

TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.

Components listed below are present on the following International Inventory lists:

<u>Ingredients</u>	<u>CAS #</u>	<u>European EINECS</u>	<u>Australia AICS</u>	<u>Philippines PICCS</u>	<u>Japan ENCS</u>	<u>Korea KECI/KECL</u>	<u>China IECSC</u>	<u>NewZealand IOC</u>
Tall oil fatty acid	Not reported	Listed	Listed	Listed	Listed	Listed		N/Av
Polymer	Not reported	N/Av	N/Av	N/Av	N/Av	N/Av	N/Av	N/Av

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

NFPA Rating : 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious
 : *Health:* 0 *Flammability:* 1 *Instability:* 0 *Special Hazards:* None.

HMIS Rating : * - Chronic hazard 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious
 : *Health:* 0 *Flammability:* 1 *Reactivity:* 0

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Legend

ACGIH: American Conference of Governmental Industrial Hygienists
 AICS: Australian Inventory of Chemical Substances
 CAS: Chemical Abstract Services
 CSA: Canadian Standards Association
 EC50: Effective Concentration 50%.
 EINECS: European Inventory of Existing Commercial chemical Substances
 ENCS: Existing and New Chemical Substances
 HSDB: Hazardous Substances Data Bank
 IARC: International Agency for Research on Cancer
 IBC: Intermediate Bulk Container
 IECSC: Inventory of Existing Chemical Substances
 IMDG: International Maritime Dangerous Goods
 IOC: Inventory of Chemicals
 KECI: Korean Existing Chemicals Inventory
 KECL: Korean Existing Chemicals List
 LC: Lethal Concentration
 LD: Lethal Dose
 N/Av: Not Applicable
 N/Av: Not Available
 NIOSH: National Institute of Occupational Safety and Health
 NOEC: No observable effect concentration
 NTP: National Toxicology Program
 OECD: Organisation for Economic Co-operation and Development
 OSHA: Occupational Safety and Health Administration
 PEL: Permissible exposure limit
 PNOS: Particles Not Otherwise Specified
 PICCS: Philippine Inventory of Chemicals and Chemical Substances
 RTECS: Registry of Toxic Effects of Chemical Substances
 SDS: Safety Data Sheet
 STEL: Short Term Exposure Limit
 TDG: Canadian Transportation of Dangerous Goods Act & Regulations
 TLV: Threshold Limit Values
 TSCA: Toxic Substance Control Act
 TWA: Time Weighted Average
 WHMIS: Workplace Hazardous Materials Identification System

Bibliography

1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2015.
2. International Agency for Research on Cancer Monographs, searched 2015.
3. Canadian Centre for Occupational Health and Safety, CCIInfoWeb databases, 2015 (Chempendium, HSDB and RTECs).
4. Material Safety Data Sheets from manufacturer.
5. OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2015.

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