



**FLEETGUARD DCA-4 LIQUID** 

MSDS No.:LT16571

MSDS Preparation Date: May 4, 2006

## MATERIAL SAFETY DATA SHEET

# **SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION**

Product identifier : FLEETGUARD DCA-4 LIQUID

Product Code(s) : DCA 60L (1 Pint / 473 mL); DCA 65L (64 ounce / 1.89L); DCA 75L (5 Gallon / 208 L Pail);

DCA 80L (55 Gallon / 208 L Drum); DCA 70L (1 gallon/3.785 L); 391412663 (bulk).

Product Use : Cooling system additive.

Chemical Family : Mixture.

Supplier's name and address: Manufacturer's name and address:

Cummins Filtration Refer to Supplier

1200 Fleetguard Road Cookeville, TN, U.S.A.

38506

Information Telephone No. : (931) 526-9551 (Hours of operation: 24 Hours per day, 7 days per week)

24 Hr. Emergency Tel # : Chemtrec (800) 424-9300 (Within Continental U.S.); Chemtrec (703) 527-3887 (Outside

U.S.).

## **SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS**

			ACGIH TLV		OSHA PEL	
<u>Ingredients</u>	CAS#	% (weight)	TWA	STEL	<u>PEL</u>	STEL
Potassium nitrate	7757-79-1	1.0 - 5.0	N/Av	N/Av	N/Av	N/Av
Sodium molybdate	7631-95-0	1.0 - 5.0	0.5 mg/m3	N/Av	5 mg/m3	N/Av
Adipic acid	124-04-9	1.0 - 5.0	5 mg/m3	N/Av	N/Av	N/Av
Potassium phosphate	7758-11-4	7.0 - 13.0	N/Av	N/Av	N/Av	N/Av
Sodium nitrite	7632-00-0	1.0 - 5.0	N/Av	N/Av	N/Av	N/Av

Note: The ACGIH TLV and OSHA PEL listed above for Sodium molybdate is as 'Molybdenum, soluble compounds'.

# **SECTION 3 - HAZARDS IDENTIFICATION**

#### **EMERGENCY OVERVIEW**

Blue liquid. Little or no odour. DANGER! Contains a strong oxidizer. Contact with combustible material may cause fire. Harmful or fatal if inhaled or swallowed. Contains material which may cause adverse blood system effects. May cause severe irritation and corrosive damage in the mouth, throat and stomach. Causes eye irritation. May cause skin and respiratory irritation.

## \*\*\*POTENTIAL HEALTH EFFECTS\*\*\*

Target organs : Eyes, skin, respiratory system, digestive system, central nervous system, blood system.

Routes of exposure : Inhalation: YES Skin Absorption: YES Skin & Eyes: YES Ingestion: YES

Signs and symptoms of short-term (acute) exposure

Inhalation: Harmful if inhaled. If mists are formed, may cause severe irritation to the nose, throat and respiratory tract.

Symptoms may include coughing, chest pain and shortness of breath. May be absorbed following

inhalation, and cause additional symptoms similar to those listed for ingestion.

Skin: May cause mild to moderate skin irritation. Product may be absorbed and cause symptoms similar to those

listed for ingestion.

Eyes: Causes severe eye irritation. Symptoms will include pain, redness and tearing.





**FLEETGUARD DCA-4 LIQUID** 

MSDS No.:LT16571

MSDS Preparation Date: May 4, 2006

Page 2 of 8

*Ingestion:* 

May cause severe irritation and corrosive damage in the mouth, throat and stomach. Symptoms may include severe pain, vomiting, diarrhea, collapse and death. Ingestion of large amounts of nitrites or nitrates may affect oxygen transport in the blood and blood system, causing methemoblobinemia. Symptoms of poisoning may include cyanosis (bluish discolouration of the skin), nausea, dizziness, rapid heartbeat, irregular breathing, coma and death.

Effects of long-term (chronic) exposure

Prolonged or repeated contact may cause drying, cracking and defatting of the skin.

Repeated or prolonged overexposure may cause anemia and kidney effects.

Conditions aggravated by overexposure

: Pre-existing skin, eye, respiratory or blood system disorders.

Carcinogenic status
Additional health hazards
Potential environmental
effects

: See TOXICOLOGICAL INFORMATION, Section 11.

See TOXICOLOGICAL INFORMATION, Section 11.

: See ECOLOGICAL INFORMATION (Section 12).

## **SECTION 4 - FIRST AID MEASURES**

Inhalation : Immediately remove person to fresh air. If breathing has stopped, give artificial respiration.

Obtain medical attention if symptoms develop and persist.

Skin contact . Immediately flush skin with running water for at least 15 minutes, while removing

contaminated clothing. Obtain medical attention. Discard contaminated clothing and shoes.

Eye contact : Immediately flush eyes with running water for at least 20 minutes. Seek immediate medical

ttention.

Ingestion : If swallowed, obtain medical attention immediately. Do not induce vomiting. Never give

anything by mouth to an unconscious person.

Notes For Physician : Treat symptomatically.

## **SECTION 5 - FIRE FIGHTING MEASURES**

Fire hazards/conditions of flammability

: Not flammable under normal conditions of handling. However, substance may be considered a strong oxidizer. This product contains Sodium nitrite / Potassium nitrate, which enhance the burning rate of other materials. Contact with combustible material may cause fire. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.

Flammability classification

(OSHA 29 CFR 1910.1200) Non-flammable.

Flash point : N/Ap

Flash point Method : COC Auto-ignition temperature : N/Av

Lower flammable limit (% by Upper flammable limit (% by

vol.) : N/Av vol.) : N/Av

Oxidizing properties : Contains a strong oxidizer. Contact with combustible material may cause fire.

Flame Projection Length : N/Ap Flashback observed : N/Ap

Explosion data: Sensitivity to mechanical impact / static discharge

: Not available.

Suitable extinguishing media

Use water spray to fight fires.

Special fire-fighting procedures/equipment

: Firefighters should wear proper protective equipment and self contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame.





FLEETGUARD DCA-4 LIQUID

MSDS No.:LT16571

MSDS Preparation Date: May 4, 2006

Page 3 of 8

**Hazardous combustion** 

products

Carbon oxides, sodium oxides, nitrogen oxides and other irritating fumes and smoke.

NFPA Rating 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe

: Health: 2 Flammability: 0 Instability: 1 Special Hazards: OX

#### SECTION 6 - ACCIDENTAL RELEASE MEASURES

#### Personal precautions

: Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.

#### **Environmental precautions**

Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply.

# Spill response/cleanup

Remove all sources of ignition. Ventilate area of release. Stop spill or leak at source if safely possible. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). For large spills on surfaces other than pavement (e.g. soil or sand), spills may be handled by digging up and removing the affected surface and placing it in approved containers. Contaminated absorbent material may pose the same hazards as the spilled product. Notify the appropriate authorities as required.

## **Prohibited materials**

: Use non-flammable absorbent only. Do not use combustible absorbents, such as sawdust.

# Special spill response procedures

In case of a transportation accident, contact CHEMTREC at 1-800-424-9300 or International at 1-703-527-3887. If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8002).

US CERCLA Reportable quantity (RQ): sodium nitrite (100 lbs); Adipic acid (5000 lbs.).

# **SECTION 7 - HANDLING AND STORAGE**

#### Safe Handling procedures

: Wear chemically resistant protective equipment during handling. Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional information on acceptable personal protective equipment. Use only in a well ventilated area. Avoid breathing vapour or mist. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep away from extreme heat and flame. Keep away from flammable and combustible materials. Keep away from acids and other incompatibles. Use caution when opening cap. Keep containers tightly closed when not in use. Empty containers retain residue (liquid and/or vapour) and can be dangerous.

#### Storage requirements

Store in a cool, dry, well-ventilated area. Keep away from incompatibles. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking in the area. Do not freeze.

#### Incompatible materials

 Strong acids, strong oxidizing agent (e.g. Chlorides, peroxides), reducing agents (e.g. cyanides, metal hydrides). Avoid organic materials.

## Special packaging materials

Not available.





**FLEETGUARD DCA-4 LIQUID** 

MSDS No.:LT16571

Page 4 of 8 MSDS Preparation Date: May 4, 2006

## SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ventilation and engineering

measures

Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits. Local exhaust ventilation is preferred to prevent contaminant dispersion into

work area.

Respiratory protection Respiratory protection is required if the concentrations exceed the TLV. NIOSH-approved

respirators are recommended. Seek advice from respiratory protection specialists.

Respirators should be selected based on the form and concentration of contaminants in air,

and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4-02.

Skin protection Gloves impervious to the material are recommended. Advice should be sought from glove

suppliers.

Chemical splash goggles are recommended. A full face shield may also be necessary. Eye / face protection

Other protective equipment

: Emergency showers and eyewash facilities should be nearby. Wear a chemically resistant

apron and long sleeves when dispensing, to prevent skin contact.

General hygiene considerations

Avoid breathing vapour or mist. Avoid contact with eyes, skin and clothing. When using do not eat or drink. When using do not smoke. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse.

Permissible exposure levels

· For individual ingredient exposure levels, see Section 2.

## **SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

Physical state : Liquid. Appearance Blue liquid.

Odour Little or no odour. Odour threshold N/Av

pН 10.0 - 11.0

**Boiling point** 100°C / 212°F Specific gravity 1.13 - 1.15

Melting/Freezing point N/Av Coefficient of water/oil

distribution N/Av

Complete

Solubility in water

Vapour pressure (mmHg @

20° C / 68° F)

: 760 @ 100°C / 212°F

**Evaporation rate (n-Butyl** : N/Av Vapour density (Air = 1)

acetate = 1) N/Av

**Volatile organic Compounds** 

(VOC's) Volatiles (% by weight) N/Av N/Av

# **SECTION 10 - REACTIVITY AND STABILITY DATA**

Stability and reactivity Stable under the recommended storage and handling conditions prescribed. However,

substance may be considered a strong oxidizer. Contact with combustible material may

cause fire.

Hazardous polymerization : Will not occur.

Conditions to avoid Avoid excessive heat, sparks and open flame. Do not use in areas without adequate

ventilation. Keep away from flammable and combustible materials.

**Materials To Avoid And** 

Incompatibility

: Incompatible materials (see Section 7).

Hazardous decomposition products

: None known, refer to hazardous combustion products in Section 5.

## **SECTION 11 - TOXICOLOGICAL INFORMATION**

Toxicological data

There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.





**FLEETGUARD DCA-4 LIQUID** 

MSDS No.:LT16571

MSDS Preparation Date: May 4, 2006

Page 5 of 8

	LC50(4hr)	LD <sub>50</sub>	
<u>Ingredients</u>	inh, rat	<u>oral</u>	<u>dermal</u>
Potassium nitrate	N/Av	3540 mg/kg (rat)	N/Av
Sodium molybdate	>2080 mg/m3	4000 mg/kg (rat)	N/Av
Adipic acid	N/Av	> 5000 mg/kg (rat); 1900 mg/kg (mouse)	N/Av
Potassium phosphate	N/Av	N/Av	N/Av
Sodium nitrite	5.5 mg/m3	180 mg/kg (rat)	N/Av

Carcinogenic status: No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

Reproductive effects : None known.

Teratogenicity : None known.

Mutagenicity : None known.

Epidemiology : Not available.

Sensitization to material : None known.

Synergistic materials : Not available.

Irriatancy : Mild to moderate skin irritant. Severe eye irritant.

other important hazards : None known.

# **SECTION 12 - ECOLOGICAL INFORMATION**

**Environmental effects** 

The ecological characteristics of this product have not been fully investigated. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.

Important environmental

characteristics

: Not available.

**Ecotoxicological**: No data is available on the product itself.

#### **SECTION 13 - DISPOSAL CONSIDERATIONS**

Handling for Disposal Methods of Disposal : Handle waste according to recommendations in Section 7.

Dispose in accordance with all applicable federal, state, provincial and local regulations.
 Contact your local, state, provincial or federal environmental agency for specific rules.

RCRA

: If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

## **SECTION 14 - TRANSPORTATION INFORMATION**

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
49CFR/DOT	None	Not regulated.	Not regulated	-None-	$\otimes$
49CFR/DOT Additional information	Not regulated for road or rail shipment if packaged in non-bulk containers (450 L / 119 Gallons or less each). If the quantity of Sodium nitrite is greater than 100 lbs. (45.4 kg) per package (one single package would weigh >2000 lbs.), the following DOT shipping description applies:  RQ Environmentally hazardous substances, liquid, n.o.s. (Sodium nitrite), 9, UN3082, III.				
TDG	None	Not regulated.	Not regulated	-None-	$\otimes$





#### **FLEETGUARD DCA-4 LIQUID**

MSDS No.:LT16571

Page 6 of 8

MSDS Preparation Date: May 4, 2006

GEOGRAPH AND STREET AND STREET STREET						
IMDG Additional information	None.					
IMDG	None	Not regulated.	Not regulated	-None-	$\otimes$	
ICAO/IATA Additional information	None.					
ICAO/IATA	None	Not regulated.	Not regulated	-None-	$\otimes$	
Additional information	None.					

#### **SECTION 15 - REGULATORY INFORMATION**

#### **US Federal Information:**

OSHA: This material is classified as hazardous under OSHA regulations (29CFR 1910.1200).

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

CERCLA Reportable Quantity (RQ) (40 CFR 117.302): sodium nitrite (100 lbs.); Adipic acid (5000 lbs.).

SARA TITLE III: Sec. 302, Extremely Hazardous Substances, 40 CFR 355: No Extremely Hazardous Substances are present in this material.

SARA TITLE III: Sec. 311 and 312. MSDS Requirements, 40 CFR 370 Hazard Classes; Immediate (Acute) health hazard: Chronic health hazard. Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SARA TITLE III: Sec. 313, Toxic Chemicals Notification, 40 CFR 372: This product may be subject to SARA notification requirements, since it contains Toxic Chemical constituents above their de minimus concentrations. This product contains: sodium nitrite.

## **US State Right to Know Laws:**

New Jersey Labeling Requirements: This product contains the following substances required to be disclosed on product labeling: Potassium phosphate (CAS # 7758-11-4, 7 - 13%); Potassium nitrate (CAS # 7757-79-1, 1 - 5%); sodium nitrite (CAS # 7632-00-0, 1 - 5%); Sodium molybdate (CAS # 7631-95-0, 1 - 5%); Adipic acid (CAS # 124-04-9, 1 - 5%). Potassium phosphate and Sodium molybdate are not considered hazardous substances in the State of New Jersey.

California Proposition 65: To the best of our knowledge, this product does not contain any chemicals known to the State of California to cause cancer or reproductive harm.

#### **International Information:**

Canadian WHMIS Classification: Class C (Oxidizing Material); Class D1A (Materials Causing Immediate and Serious Toxic Effects, Very Toxic Material); Class D2B (Materials Causing Other Toxic Effects, Toxic Material).

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.





**FLEETGUARD DCA-4 LIQUID** 

MSDS No.:LT16571

MSDS Preparation Date: May 4, 2006

Page 7 of 8

#### **SECTION 16 - OTHER INFORMATION**

HMIS Rating : \*- Chronic hazard 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe

Health: \*3 Flammability: 0 Reactivity: 1

Legend : ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstract Services

CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of

1980

CFR: Code of Federal Regulations
CSA: Canadian Standards Association
DOT: Department of Transportation
EPA: Environmental Protection Agency
NFPA: National Fire Protection Association
HMIS: Hazardous Materials Identification System
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
IMDG: International Maritime Dangerous Goods

Inh: Inhalation N/Ap: not applicable N/Av: not available

NIOSH: National Institute of Occupational Safety and Health

NTP: National Toxicology Program

OSHA: Occupational Safety and Health Administration

PEL: Permissible Exposure Limit

RCRA: Resource Conservation and Recovery Act RTECS: Registry of Toxic Effects of Chemical Substances SARA: Superfund Amendments & Reauthorization Act

STEL: Short Term Exposure Limit TLV: Threshold Limit Values TWA: Time Weighted Average

WHMIS: Workplace Hazardous Materials Identification System

## References

- 1. ACGIH, Threshold Limit Values and Biological Exposure Indices for 2005.
- 2. International Agency for Research on Cancer Monographs, searched 2006.
- 3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2006 (Chempendium, HSDB and RTECs).
- 4. Material Safety Data Sheet from manufacturer.
- 5. California Proposition 65 List February 3, 2006 version.

#### Prepared for:

Cummins Filtration 1200 Fleetguard Road Cookeville, Tennessee, U.S.A., 38506

http://www.fleetguard.com

#### Prepared by:

ICC The Compliance Center Inc. Canada: 1-888-977-4834 USA: 1-888-442-9628

http://www.thecompliancecenter.com











**FLEETGUARD DCA-4 LIQUID** 

MSDS No.:LT16571

Page 8 of 8

MSDS Preparation Date: May 4, 2006

## **DISCLAIMER OF LIABILITY**

The information in this MSDS was obtained from sources, which we believe are reliable. However, since the conditions of handling and use are beyond our control, we assume no liability for damages incurred by use of this material. This MSDS was prepared, and is to be used, for this product only. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that may exist. If the product is used as a component in another product, this information may not be applicable. Users of this product should satisfy themselves that the conditions and methods of use assure the product is used safely. No representations or warranties, either expressed or implied, of any nature are made hereunder with respect to the information contained herein. It is the responsibility of the user to comply with any and all federal, state, or local laws and regulations that may exist. Nothing contained herein is to be construed as a recommendation for use in violation of any applicable laws or regulations.

Preparation Date: : May 4, 2006

END OF DOCUMENT