



Material Safety Data Sheet

ALIETTE® SYSTEMIC FUNGICIDE WATER DISPERSABLE GRANULE

MSDS Number: 102000019662

MSDS Version 1.0

Revision Date: 01/05/2012

Print Date: 01/09/2012

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product name	ALIETTE® SYSTEMIC FUNGICIDE WATER DISPERSABLE GRANULE
MSDS Number	102000019662
Product code (UVP)	79386508
PCP Registration No.	27688
Product Use	Fungicide

Bayer CropScience Inc
#200, 160 Quarry Park Blvd, SE
Calgary, Alberta T2C 3G3
Canada

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)
For Product Information call: 1-888-283-6847

SECTION 2. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

<u>Emergency Overview</u>	Warning! Causes eye irritation. Avoid breathing dust. Avoid contact with skin, eyes and clothing.
Physical State	dry, free flowing granules
Odor	characteristic
Appearance	grey to tan
Exposure routes	Eye contact, Skin Absorption, Ingestion, Inhalation
Immediate Effects	
Eye	Causes irritation, redness. Causes moderate eye injury. Avoid contact with eyes.
Skin	Causes irritation, redness, swelling. Harmful if absorbed through skin. Avoid contact with skin and clothing.
Ingestion	Do not take internally.
Inhalation	May cause upper respiratory tract irritation. Harmful if inhaled. Avoid breathing dust.



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Chronic or Delayed Long-Term This product is not listed as a carcinogen by ACGIH, NTP, IARC or OSHA. However, it may contain crystalline silica (quartz), a substance which has been listed as a carcinogen by ACGIH, NTP and IARC. Crystalline silica is a naturally-occurring mineral component of many sands and clays. Although the carcinogenic potential of crystalline silica in humans is controversial, it must be considered if it is inhaled under excessive exposure conditions. The respirable portion of the silica that may be contained in this product, however, is small, such that inhalation exposure during anticipated conditions of use is minimal.

Medical Conditions Aggravated by Exposure No specific medical conditions are known which may be aggravated by exposure to this product. As with all materials which can cause upper respiratory tract irritation, persons with a history of asthma, emphysema, or hyperreactive airways disease may be more susceptible to overexposure. Pulmonary and respiratory diseases may be aggravated by exposure to respirable crystalline silica. Skin contact may aggravate existing skin disease.

Potential Environmental Effect Toxic to aquatic and estuarine invertebrates.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Fosetyl Aluminium	39148-24-8	80.00
Nonylphenol ethoxylate, branched	68412-54-4	8.40
Lignosulfonic acid, sodium salt, sulfomethylated	68512-34-5	4.40
Synthetic amorphous silica	112926-00-8	
Quartz (Silica, Crystalline)	14808-60-7	0.16
Crystalline quartz (respirable)		

SECTION 4. FIRST AID MEASURES

General When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Eye Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.

Skin Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.

Ingestion Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.



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Inhalation	Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.
Notes to physician Signs and Symptoms	The following symptoms may occur: The product causes irritation of eyes, skin and mucous membranes.
Treatment	Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.

SECTION 5. FIRE FIGHTING MEASURES

Flash point	not applicable
Autoignition temperature	no data available
Lower Flammability Limit	no data available
Upper Flammability Limit	no data available
Fire and Explosion Hazards	In the event of fire the following may be released: Carbon monoxide (CO) Nitrogen oxides (NOx) Oxides of phosphorus Accumulation of fine dust may entail the risk of a dust explosion in the presence of air.
Suitable extinguishing media	Foam, Dry powder, Carbon dioxide (CO2)
Fire Fighting Instructions	Keep out of smoke. Fight fire from upwind position. Do not allow run-off from fire fighting to enter drains or water courses. Contain the spread of the fire-fighting media. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.
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Methods for cleaning up Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations. Decontaminate tools and equipment following cleanup.

Additional advice Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal.

SECTION 7. HANDLING AND STORAGE

Handling procedures Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation. Handle and open container in a manner as to prevent spillage.

Storing Procedures Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Work/Hygienic Procedures Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.

Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection Follow all label instructions. Train employees in safe use of the product.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

Eye/Face Protection Safety glasses, in case of increased risk, also a face shield

Hand protection Chemical resistant nitrile rubber gloves

Body Protection Wear long-sleeved shirt and long pants and shoes plus socks.

Respiratory protection When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.



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Exposure Limits

Fosetyl Aluminium	39148-24-8	OES BCS*	TWA	10 mg/m3
Synthetic amorphous silica	112926-00-8	OEL (QUE)	TWA	6 mg/m3
		CAD AB OEL	TWA	10 mg/m3
		CAD BC OEL	TWA	4 mg/m3
		CAD BC OEL	TWA	1.5 mg/m3
		CAD ON OEL	TWAEV	10 mg/m3
		OEL (QUE)	TWA	6 mg/m3
Quartz (Silica, Crystalline)	14808-60-7	OEL (QUE)	TWA	0.1 mg/m3
		CAD AB OEL	TWA	0.1 mg/m3
		CAD BC OEL	TWA	0.025 mg/m3
		CAD ON OEL	TWAEV	0.10 mg/m3
		OEL (QUE)	TWA	0.1 mg/m3
		CAD BC OEL	TWA	0.025 mg/m3

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	grey to tan
Physical State	dry, free flowing granules
Odor	characteristic
pH	3.0 - 4.0 (5.0 %)
Vapor Pressure	no data available
Bulk density	28 - 35 lb/ft ³
Evaporation rate	no data available
Boiling Point	no data available
Melting / Freezing Point	no data available
Water solubility	dispersible
Minimum Ignition Energy	no data available
Decomposition temperature	no data available



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Partition coefficient: n-octanol/water no data available

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid	Exposure to moisture.
Incompatibility	Strong acids Strong bases Strong oxidizing agents Strong reducing agents
Hazardous Decomposition Products	Thermal decomposition Oxides of phosphorus Carbon dioxide (CO ₂) Carbon monoxide Phosphine gas
Hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions.
Chemical Stability	Stable under normal conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Only acute toxicity studies have been performed on the formulated product. The non-acute information pertains to the technical-grade active ingredient, fosetyl aluminum.

Acute oral toxicity	male/female combined rat: LD50: 2,860 mg/kg
Acute dermal toxicity	rabbit: LD50: > 2,020 mg/kg
Acute inhalation toxicity	male/female combined rat: LC50: > 5 mg/l Exposure time: 4 h Determined in the form of dust.
	male/female combined rat: LC50: > 20.0 mg/l Exposure time: 1 h Determined in the form of dust. Extrapolated from the 4 hr LC50.
Skin irritation	rabbit: Slight irritation
Eye irritation	rabbit: Mild eye irritation.
Sensitisation	guinea pig: Non-sensitizing.



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Chronic toxicity Fosetyl-al caused adrenal, urinary bladder and/or testicular effects in chronic studies in rats and dogs.

Assessment Carcinogenicity

Fosetyl-al was not carcinogenic in an oncogenicity study in mice. In a carcinogenicity study in rats, an increased incidence of urinary bladder tumors were seen at extremely high doses not likely to occur outside the experimental laboratory. Therefore, EPA concluded that fosetyl-al is not likely to pose a carcinogenic hazard to humans.

ACGIH

Quartz (Silica, Crystalline)	14808-60-7	Group A2
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NTP

Crystalline quartz (respirable)

IARC

Quartz (Silica, Crystalline)	14808-60-7	Overall evaluation: 1
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OSHA

None.

Reproductive toxicity REPRODUCTION: Fosetyl-al was not a reproductive toxicant in a multi-generation reproduction study in rats.

DEVELOPMENTAL TOXICITY: Fosetyl-al was not a primary developmental toxicant in rats and rabbits. Developmental effects were observed in rats but were considered secondary to maternal toxicity.

Mutagenicity Fosetyl-al was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

SECTION 12. ECOLOGICAL INFORMATION

Environmental precautions

Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product as specified on the label.



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SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance Follow container label instructions for disposal of wastes generated during use in compliance with the product label. Dispose in accordance with all local, state/provincial and federal regulations.

Container Disposal Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities. If burned, stay out of smoke.

SECTION 14. TRANSPORT INFORMATION

According to national and international transport regulations this material is not classified as dangerous goods / hazardous material.

Freight Classification: INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON

SECTION 15. REGULATORY INFORMATION

PCP Registration No. 27688

US Federal Regulations

TSCA list

Nonylphenol ethoxylate, branched	68412-54-4
Lignosulfonic acid, sodium salt, sulfomethylated	68512-34-5
Quartz (Silica, Crystalline)	14808-60-7

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

None.

SARA Title III - Section 302 - Notification and Information

None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

None.

US States Regulatory Reporting

CA Prop65

This product contains a chemical known to the State of California to cause cancer. Crystalline quartz (respirable)

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients

Quartz (Silica, Crystalline)	14808-60-7	IL, MA
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Canadian Regulations

Canadian Domestic Substance List

Nonylphenol ethoxylate, branched	68412-54-4
Lignosulfonic acid, sodium salt, sulfomethylated	68512-34-5
Synthetic amorphous silica	112926-00-8
Quartz (Silica, Crystalline)	14808-60-7

Environmental

CERCLA

None.

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

International Regulations

European Inventory of Existing Commercial Substances (EINECS)

Fosetyl Aluminium	39148-24-8
Quartz (Silica, Crystalline)	14808-60-7

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 2 Flammability - 0 Instability - 0 Others - none

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 2 Flammability - 0 Physical Hazard - PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: New Material Safety Data Sheet.

Prepared by the HSE Department of Bayer CropScience Inc. (306)-721-0310.

Revision Date: 01/05/2012

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