



CHIPCO® SIGNATURE® FUNGICIDE

Version 2.0 / USA
102000020218

1/11
Revision Date: 07/29/2014
Print Date: 02/09/2015

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Trade name CHIPCO® SIGNATURE® FUNGICIDE
Product code (UVP) 79375409
SDS Number 102000020218
EPA Registration No. 432-890

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

Use Fungicide
Restrictions on use See product label for restrictions.

Information on manufacturer

Bayer Environmental Science
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
United States

Emergency Telephone Number (24hr/ 7 days) 1-800-334-7577 (24 hours/day)

Product Information Telephone Number 1-800-331-2867

SDS Information or Request SDSINFO.BCS-NA@bayer.com

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200

Eye irritation : Category 2B
Signal word: Warning

Hazard statements

Causes eye irritation.

Precautionary statements

Wash thoroughly after handling.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Other hazards

No other hazards known.



CHIPCO® SIGNATURE® FUNGICIDE

Version 2.0 / USA
102000020218

2/11
Revision Date: 07/29/2014
Print Date: 02/09/2015

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Fosetyl Aluminium	39148-24-8	80.00
Nonylphenol ethoxylate, branched	68412-54-4	7.00
Lignosulfonic acid, sodium salt, sulfomethylated	68512-34-5	2.80
Crystalline quartz (respirable)	14808-60-7	0.12

SECTION 4: FIRST AID MEASURES

Description of first aid measures

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

Most important symptoms and effects, both acute and delayed

Symptoms	The following symptoms may occur:, Skin, eye and mucous membrane irritation
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Indication of any immediate medical attention and special treatment needed

Risks	Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.
Treatment	Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.



CHIPCO® SIGNATURE® FUNGICIDE

Version 2.0 / USA
102000020218

3/11
Revision Date: 07/29/2014
Print Date: 02/09/2015

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable Foam, Dry powder, Carbon dioxide (CO₂), Water spray

Unsuitable None known.

Special hazards arising from the substance or mixture In the event of fire the following may be released: Carbon monoxide (CO), Nitrogen oxides (NO_x), Oxides of phosphorus

Advice for firefighters

Special protective equipment for fire-fighters Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

Further information Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.

Flash point not applicable

Autoignition temperature no data available

Lower explosion limit not applicable

Upper explosion limit not applicable

Explosivity no data available

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods and materials for containment and cleaning up

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.

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

Reference to other sections Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE



CHIPCO® SIGNATURE® FUNGICIDE

Version 2.0 / USA
102000020218

4/11
Revision Date: 07/29/2014
Print Date: 02/09/2015

Precautions for safe handling

Advice on safe handling Handle and open container in a manner as to prevent spillage. Use only in area provided with appropriate exhaust ventilation.

Hygiene measures Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Smoking, eating and drinking should be prohibited in the application area.
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.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers 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.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Fosetyl Aluminium	39148-24-8	10 mg/m3 (TWA)		OES BCS*
Nonylphenol ethoxylate, branched (Vapor.)	68412-54-4	600ug/m3 (ST ESL)	02 2013	TX ESL
Nonylphenol ethoxylate, branched (Particulate.)	68412-54-4	50ug/m3 (ST ESL)	02 2013	TX ESL
Nonylphenol ethoxylate, branched (Particulate.)	68412-54-4	5ug/m3 (AN ESL)	02 2013	TX ESL
Nonylphenol ethoxylate, branched (Vapor.)	68412-54-4	60ug/m3 (AN ESL)	02 2013	TX ESL
Crystalline quartz (respirable)	14808-60-7	0.1 mg/m3 (TWA)	1998	JO TLV
Crystalline quartz (respirable) (Respirable fraction.)	14808-60-7	0.025 mg/m3 (TWA)	02 2012	ACGIH
Crystalline quartz (respirable) (Respirable dust.)	14808-60-7	0.05 mg/m3 (REL)	2010	NIOSH
Crystalline quartz (respirable) (Respirable dust.)	14808-60-7	0.1 mg/m3 (TWA)	1989	OSHA Z1A



CHIPCO® SIGNATURE® FUNGICIDE

Version 2.0 / USA
102000020218

5/11
Revision Date: 07/29/2014
Print Date: 02/09/2015

Crystalline quartz (respirable) (Respirable dust.)	14808-60-7	0.1 mg/m3 (TWA)	06 2008	TN OEL
Crystalline quartz (respirable) (Particulate.)	14808-60-7	14ug/m3 (ST ESL)	02 2013	TX ESL
Crystalline quartz (respirable) (Particulate.)	14808-60-7	0.27ug/m3 (AN ESL)	02 2013	TX ESL
Crystalline quartz (respirable) (Total dust.)	14808-60-7	0.3 mg/m3 (TWA PEL)	08 2010	US CA OEL
Crystalline quartz (respirable) (Respirable dust.)	14808-60-7	0.1 mg/m3 (TWA PEL)	08 2010	US CA OEL
Crystalline quartz (respirable) (Respirable.)	14808-60-7	2.4millions of particles per cubic foot of air (TWA)	2000	Z3
Crystalline quartz (respirable) (Respirable.)	14808-60-7	0.1 mg/m3 (TWA)	2000	Z3
Crystalline quartz (respirable) (Total dust.)	14808-60-7	0.3 mg/m3 (TWA)	2000	Z3

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

Exposure controls

Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

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.

Hand protection

Chemical resistant nitrile rubber gloves

Eye protection

Goggles

Skin and body protection

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

General protective measures

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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

green



CHIPCO® SIGNATURE® FUNGICIDE

Version 2.0 / USA
102000020218

6/11
Revision Date: 07/29/2014
Print Date: 02/09/2015

Physical State	water-dispersible granules
Odor	slightly acidic
Odour Threshold	no data available
pH	3.9
Vapor Pressure	no data available
Vapor Density (Air = 1)	no data available
Bulk density	32 - 38 lb/ft ³
Evaporation rate	not applicable
Boiling Point	not applicable
Melting / Freezing Point	not applicable
Water solubility	dispersible
Minimum Ignition Energy	no data available
Decomposition temperature	no data available
Partition coefficient: n-octanol/water	no data available
Viscosity	not applicable
Flash point	not applicable
Autoignition temperature	no data available
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Explosivity	no data available

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Thermal decomposition	no data available
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.



CHIPCO® SIGNATURE® FUNGICIDE

Version 2.0 / USA
102000020218

7/11
Revision Date: 07/29/2014
Print Date: 02/09/2015

Conditions to avoid	Exposure to moisture.
Incompatible materials	Strong oxidizing agents, Strong acids, Strong bases
Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Eye contact, Skin Absorption, Ingestion, Inhalation
Immediate Effects	
Eye	Causes redness, irritation, tearing. Causes moderate eye injury.
Skin	Causes irritation, redness, swelling. Harmful if absorbed through skin.
Ingestion	Harmful if swallowed.
Inhalation	May cause upper respiratory tract irritation. Harmful if inhaled.
Information on toxicological effects	
Acute oral toxicity	LD50 (male/female combined rat) 2,860 mg/kg
Acute inhalation toxicity	LC50 (male/female combined rat) > 5.0 mg/l Exposure time: 4 h Determined in the form of dust. LC50 (male/female combined rat) > 20.0 mg/l Exposure time: 1 h Determined in the form of dust. Extrapolated from the 4 hr LC50.
Acute dermal toxicity	LD50 (rabbit) > 2,020 mg/kg
Skin irritation	Slight irritation (rabbit)
Eye irritation	Mild eye irritation. (rabbit)
Sensitisation	Non-sensitizing. (guinea pig)

Assessment repeated dose toxicity

Fosetyl Aluminium did not cause specific target organ toxicity in experimental animal studies.

Assessment Mutagenicity

Fosetyl Aluminium was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment Carcinogenicity

Fosetyl Aluminium was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH

Crystalline quartz (respirable) 14808-60-7 Group A2

NTP



CHIPCO® SIGNATURE® FUNGICIDE

Version 2.0 / USA
10200020218

8/11
Revision Date: 07/29/2014
Print Date: 02/09/2015

Crystalline quartz (respirable) 14808-60-7 2000

IARC

Crystalline quartz (respirable) 14808-60-7 Overall evaluation: 1

OSHA

None.

Assessment toxicity to reproduction

Fosetyl Aluminium did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

Fosetyl Aluminium did not cause developmental toxicity in rats and rabbits.

Further information

Only acute toxicity studies have been performed on the formulated product.
The non-acute information pertains to the active ingredient(s).

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish LC50 (Rainbow trout (*Oncorhynchus mykiss*)) > 120 mg/l
Exposure time: 96 h
Test conducted with a similar formulation.

Toxicity to aquatic invertebrates EC50 (Water flea (*Daphnia magna*)) 37 mg/l
Exposure time: 48 h
Test conducted with a similar formulation.

Toxicity to aquatic plants EC50 (*Scenedesmus subspicatus*) 27.7 mg/l
Growth rate; Exposure time: 72 h
Test conducted with a similar formulation.

Biodegradability Fosetyl Aluminium: ; rapidly biodegradable

Koc Fosetyl Aluminium: Koc: 0.1

Bioaccumulation Fosetyl Aluminium: ; Does not bioaccumulate.

Mobility in soil Fosetyl Aluminium: Highly mobile in soils

Environmental precautions 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.
Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites.
Apply this product as specified on the label.



CHIPCO® SIGNATURE® FUNGICIDE

Version 2.0 / USA
102000020218

9/11
Revision Date: 07/29/2014
Print Date: 02/09/2015

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of on site or at an approved waste disposal facility.
Contaminated packaging	Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State/Provincial and local authorities, by burning. If burned, stay out of smoke. Follow advice on product label and/or leaflet.
RCRA Information	Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

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

EPA Registration No. 432-890
US Federal Regulations
TSCA list
Nonylphenol ethoxylate, branched 68412-54-4
Lignosulfonic acid, sodium salt, sulfomethylated 68512-34-5
Crystalline quartz (respirable) 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) 14808-60-7



CHIPCO® SIGNATURE® FUNGICIDE

Version 2.0 / USA
102000020218

10/11
Revision Date: 07/29/2014
Print Date: 02/09/2015

US State Right-To-Know Ingredients

Crystalline quartz (respirable) 14808-60-7 MN

Canadian Regulations

Canadian Domestic Substance List

Lignosulfonic acid, sodium salt, sulfomethylated 68512-34-5
Crystalline quartz (respirable) 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
Crystalline quartz (respirable) 14808-60-7

EPA/FIFRA Information:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

Signal word: Caution!

Hazard statements: Harmful if swallowed, inhaled or absorbed through the skin.
Causes moderate eye injury.
Avoid contact with skin, eyes and clothing.

SECTION 16: OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 1 Flammability - 0 Instability - 0 Others - none

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

Health - 1 Flammability - 0 Physical Hazard - 0 PPE -

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

Reason for Revision: Revised according to the current OSHA Hazard Communication Standard (29CFR1910.1200)

Bayer Environmental Science
SAFETY DATA SHEET



CHIPCO® SIGNATURE® FUNGICIDE

Version 2.0 / USA
102000020218

11/11
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