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

Product identifier

Trade name: SIGNATURE™ XTRA STRESSGARD®
Product code (UVP): 81691088
SDS Number: 102000029598
PCP Registration No.: 32800

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

Use: Fungicide
Restrictions on use: See product label for restrictions.

Information on supplier

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

Responsible Department: Email: SDSINFO.BCS-NA@bayer.com

Emergency telephone no.

Emergency telephone number (24hr/ 7 days): 1-800-334-7577
Product Information Telephone Number: 1-888-283-6847

SECTION 2: HAZARDS IDENTIFICATION

Classified in accordance with Part 2 of the Hazardous Products Regulations
Carcinogenicity (Inhalation): Category 1B
Eye irritation: Category 2B

Labelling in accordance with Part 3 of the Hazardous Products Regulations

Signal word: Danger

Hazard statements
May cause cancer by inhalation.
Causes eye irritation.

Precautionary statements
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Wash thoroughly after handling.  
IF exposed or concerned: Get medical advice/attention.  
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.  
Store locked up.  
Dispose of contents/container in accordance with local regulation.

Hazards Not Otherwise Classified (HNOC)  
No physical hazards not otherwise classified.  
No health hazards not otherwise classified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Component Name</th>
<th>CAS-No.</th>
<th>Concentration % by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fosetyl-Aluminium</td>
<td>39148-24-8</td>
<td>60.0</td>
</tr>
<tr>
<td>Sodium diisopropynaphthalene sulphonate</td>
<td>1322-93-6</td>
<td>6.54</td>
</tr>
<tr>
<td>Formic acid</td>
<td>64-18-6</td>
<td>2.0</td>
</tr>
<tr>
<td>Crystalline quartz (respirable)</td>
<td>14808-60-7</td>
<td>0.35</td>
</tr>
</tbody>
</table>

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
SAFETY DATA SHEET

SIGNATURE™ XTRA STRESSGARD®
Version 1.0 / CDN

3/11
Revision Date: 09/29/2017
Print Date: 10/02/2017

Symptoms
The following symptoms may occur: Skin, eye and mucous membrane irritation

Indication of any immediate medical attention and special treatment needed
Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media
Suitable
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable
High volume water jet

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

Advice for firefighters
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

Auto-ignition temperature
No data available

Lower explosion limit
Not applicable

Upper explosion limit
Not applicable

Explosivity
Not explosive


Dust explosion class
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.
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102000029598

Additional advice
Use personal protective equipment. If the product is accidentally spilled, 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

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.
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.

Advice on common storage
Keep away from food, drink and animal feedingstuffs.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fosetyl-Aluminium (Respirable.)</td>
<td>39148-24-8</td>
<td>1 mg/m3 (TWA)</td>
<td>09 2011</td>
<td>CAD BC OEL</td>
</tr>
<tr>
<td>Fosetyl-Aluminium (Respirable fraction.)</td>
<td>39148-24-8</td>
<td>1 mg/m3 (TWA)</td>
<td>03 2011</td>
<td>CAD MB OEL</td>
</tr>
<tr>
<td>Fosetyl-Aluminium (Respirable fraction.)</td>
<td>39148-24-8</td>
<td>1 mg/m3 (TWA)</td>
<td>11 2010</td>
<td>CAD ON OEL</td>
</tr>
<tr>
<td>Fosetyl-Aluminium (Dust.)</td>
<td>39148-24-8</td>
<td>10 mg/m3 (8 HR ACL)</td>
<td>05 2009</td>
<td>CAD SK OEL</td>
</tr>
<tr>
<td>Fosetyl-Aluminium (Dust.)</td>
<td>39148-24-8</td>
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<td>CAD SK OEL</td>
</tr>
<tr>
<td>Substance</td>
<td>CAS Number</td>
<td>Exposure Limit</td>
<td>Reference Date</td>
<td>Author/Agency</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>-------------</td>
<td>----------------</td>
<td>----------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Fosetyl-Aluminium</td>
<td>39148-24-8</td>
<td>5 mg/m³ (TWA)</td>
<td>07 2009</td>
<td>CAD AB OEL</td>
</tr>
<tr>
<td>Formic acid</td>
<td>64-18-6</td>
<td>19 mg/m³/10 ppm (STEL)</td>
<td>07 2009</td>
<td>CAD AB OEL</td>
</tr>
<tr>
<td>Formic acid</td>
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<td>CAD AB OEL</td>
</tr>
<tr>
<td>Formic acid</td>
<td>64-18-6</td>
<td>10 ppm (STEL)</td>
<td>09 2011</td>
<td>CAD BC OEL</td>
</tr>
<tr>
<td>Formic acid</td>
<td>64-18-6</td>
<td>5 ppm (TWA)</td>
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<td>CAD BC OEL</td>
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<tr>
<td>Formic acid</td>
<td>64-18-6</td>
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<tr>
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<td>CAD SK OEL</td>
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<tr>
<td>Formic acid</td>
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<td>9.4 mg/m³/5 ppm (TWA)</td>
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<td>OEL (QUE)</td>
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<td>Formic acid</td>
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<td>5 ppm (TLV)</td>
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<td>OES BCS*</td>
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<tr>
<td>Crystalline quartz (respirable)</td>
<td>14808-60-7</td>
<td>0.025 mg/m³ (TWA)</td>
<td>07 2009</td>
<td>CAD AB OEL</td>
</tr>
<tr>
<td>(Respirable particles.)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Crystalline quartz (respirable)</td>
<td>14808-60-7</td>
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<td>09 2011</td>
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<tr>
<td>(Respirable fraction.)</td>
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<td></td>
<td></td>
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<td>03 2011</td>
<td>CAD MB OEL</td>
</tr>
</tbody>
</table>
**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

- **Appearance**: green
- **Physical State**: water-dispersible granules
- **Odor**: slight acid-like
- **Odour Threshold**: No data available
- **pH**: 3.15 at 10 %
  3.66 at 1 %
- **Vapor Pressure**: No data available
- **Vapor Density (Air = 1)**: No data available
- **Bulk density**: 512 - 705 kg/m3 (loose)
- **Evaporation rate**: Not applicable
**Boiling Point** | Not applicable
---|---
**Melting / Freezing Point** | Not applicable
**Water solubility** | dispersible
**Decomposition temperature** | No data available
**Viscosity** | Not applicable
**Flash point** | Not applicable
**Auto-ignition temperature** | No data available
**Lower explosion limit** | Not applicable
**Upper explosion limit** | Not applicable
**Explosivity** | Not explosive
**Dust explosion class** | No data available
**Other information** | Further safety related physical-chemical data are not known.

### SECTION 10: STABILITY AND REACTIVITY

**Reactivity**

**Thermal decomposition** | No data available
---|---
**Chemical stability** | Stable under recommended storage conditions.
**Possibility of hazardous reactions** | No dangerous reaction known under conditions of normal use.

**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 contact, Ingestion, Inhalation
**Immediate Effects**

**Eye** | Moderate eye irritation may occur.
**Ingestion** | Harmful if swallowed.
Information on toxicological effects

**Acute oral toxicity**
LD50 (female Rat) 5,000 mg/kg

**Acute inhalation toxicity**
LC50 (male/female combined Rat) > 5.22 mg/l
Exposure time: 4 h

**Acute dermal toxicity**
LD50 (male/female combined Rat) > 5,000 mg/kg

**Skin irritation**
No skin irritation (Rabbit)

**Eye irritation**
Moderate eye irritation. (Rabbit)

**Sensitisation**
Non-sensitizing. (Guinea pig)

**Assessment STOT Specific target organ toxicity – repeated exposure**
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**
Fosetyl-Aluminium 39148-24-8 Group A4
Crystalline quartz (respirable) 14808-60-7 Group A2

**NTP**
Crystalline quartz (respirable) 14808-60-7

**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**
Acute toxicity studies have been bridged from a similar formulation(s).
The non-acute information pertains to the active ingredient(s).

---

**SECTION 12: ECOLOGICAL INFORMATION**

**Toxicity to fish**
LC50 (Oncorhynchus mykiss (rainbow trout)) > 500 mg/l
Exposure time: 96 h
Toxicity to aquatic invertebrates: EC50 (Daphnia magna (Water flea)) > 1,000 mg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient fosetyl aluminium.

Toxicity to aquatic plants: ErC50 (Desmodesmus subspicatus (green algae)) 43.5 mg/l
Growth rate; Exposure time: 72 h
The value mentioned relates to the active ingredient fosetyl aluminium.

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.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods
Product: Dispose in accordance with all local, state/provincial and federal regulations.

Contaminated packaging: Do not re-use empty containers.
Consult state and local regulations regarding the proper disposal of container.
Follow advice on product label and/or leaflet.

SECTION 14: TRANSPORT INFORMATION

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

SECTION 15: REGULATORY INFORMATION

PCP Registration No.: 32800
US Federal Regulations
TSCA list
None.
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
Formic acid 64-18-6 10,000lbs

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

US State Right-To-Know Ingredients
Formic acid 64-18-6 CA, CT, IL, MN, NJ, RI
Crystalline quartz (respirable) 14808-60-7 MN, RI

Canadian Regulations
Canadian Domestic Substance List
Sodium diisopropyl(naphthalene 1322-93-6 sulphonate
Formic acid 64-18-6
Crystalline quartz (respirable) 14808-60-7

Environmental
CERCLA
Formic acid 64-18-6
Clean Water Section 307 Priority Pollutants
None.
Safe Drinking Water Act Maximum Contaminant Levels
None.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms
49CFR Code of Federal Regulations, Title 49
ACGIH US. ACGIH Threshold Limit Values
ATE Acute toxicity estimate
CAS-Nr. Chemical Abstracts Service number
CERCLA Comprehensive Environmental Response, Compensation, and Liability Act
EINECS European inventory of existing commercial substances
ELINCS European list of notified chemical substances
IARC International Agency for Research on Cancer
IATA International Air Transport Association
IMDG International Maritime Dangerous Goods
N.O.S. Not otherwise specified
NTP US. National Toxicology Program (NTP) Report on Carcinogens
SAFETY DATA SHEET

SIGNATURE™ XTRA STRESSGARD®

Version 1.0 / CDN
102000029598

Revision Date: 09/29/2017
Print Date: 10/02/2017

OECD Organization for Economic Co-operation and Development
TDG Transportation of Dangerous Goods
TWA Time weighted average
UN United Nations
WHO World health organisation

NFPA 704 (National Fire Protection Association):
- Health: 1
- Flammability: 1
- Instability: 0
- Others: none

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

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

Reason for Revision: New Safety Data Sheet.

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

Revision Date: 09/29/2017

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