SAFETY DATA SHEET

Pioneer Hi-Bred International, Inc.

Product name: Herculex® I Insect Protection

Issue Date: 07/15/2020
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Pioneer Hi-Bred International, Inc. encourages you and expects you to read and understand the entire SDS as there is important information throughout the document. This SDS provides users with information relating to the protection of human health and safety at the workplace, protection of the environment and supports emergency response

1. IDENTIFICATION

Product name: Herculex® I Insect Protection

Recommended use of the Substance or Mixture
Identified uses: Agriculture use.

COMPANY IDENTIFICATION
Pioneer Hi-Bred International, Inc.
7250 NW 62nd Avenue
Johnston, IA, 50131
UNITED STATES

Customer Information Number : 800-992-5994

EMERGENCY TELEPHONE
24-Hour Emergency Contact : 800-992-5994

2. HAZARDS IDENTIFICATION

Hazard classification
GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)
Not a hazardous substance or mixture.

Other hazards
No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Bacillus thuringiensis Cry1F protein and the genetic material necessary for its production (plasmid insert PHI8999A; event DAS-Ø15Ø7-1) in corn

4. FIRST AID MEASURES

Description of first aid measures
General advice:
No special precautions are necessary for first aid responders.

Inhalation: If any dust associated with the seed is inhaled, move to fresh air.

Skin contact: No emergency medical treatment necessary.

Eye contact: If dust associated with the seed gets in the eye, remove with water.

Ingestion: No specific intervention is anticipated as the compound is not likely to be hazardous.

Most important symptoms and effects, both acute and delayed:
Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed
Notes to physician: No emergency medical treatment necessary.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media: Not applicable

Special hazards arising from the substance or mixture
Hazardous combustion products: Not applicable

Unusual Fire and Explosion Hazards: Pneumatic conveying and other mechanical handling operations can generate combustible dust. To reduce the potential for dust explosions, electrically bond and ground equipment and do not permit dust to accumulate. Dust can be ignited by static discharge.

Advice for firefighters
Fire Fighting Procedures: Water should be applied in large quantities.

Special protective equipment for firefighters: Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Avoid breathing dust.

Environmental precautions: No special environmental precautions required.

Methods and materials for containment and cleaning up: Clean up floor areas. Use care to minimize generation of airborne dust. Local or national regulations may apply to releases and disposal of this material. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Handle in accordance with good industrial hygiene and safety practice. Avoid high concentrations of dust in air and accumulation of dust on equipment. An airborne dust of this material can create a dust explosion. To prevent dust explosions employ bonding and grounding for operations capable of generating static electricity. Protect all equipment from explosions by following applicable guidelines Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Conditions for safe storage: Store with low humidity at or below 50% and 50 degrees F to maintain seed viability for 4-6 years. Keep away from heat, sparks, flame, and other sources of ignition.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Exposure controls
Engineering controls: Good general ventilation should be provided to keep dust concentrations below the exposure limits.

Individual protection measures

Eye/face protection: No eye protection should be needed.

Skin protection

Hand protection: Protective gloves should not be needed when handling this material.

Other protection: No personal body protection normally required.

Respiratory protection: For most conditions, no respiratory protection should be needed; however, in dusty atmospheres, use an approved particulate respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	Solid
Color	Yellow
Odor	No distinct odor
Odor Threshold	Not applicable
pH	Not applicable
Melting point/range	Not applicable
Freezing point	Not applicable
Boiling point (760 mmHg)	Not applicable
Flash point	Not applicable
Evaporation Rate (Butyl Acetate = 1)	Not applicable
Flammability (solid, gas)	Not applicable
Lower explosion limit	Not applicable

Upper explosion limit	Not applicable
Vapor Pressure	Not applicable
Relative Vapor Density (air = 1)	Not applicable
Relative Density (water = 1)	Not applicable
Water solubility	Not applicable
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	Not applicable
Decomposition temperature	Not applicable
Kinematic Viscosity	Not applicable
Explosive properties	Not applicable
Oxidizing properties	Not applicable
Molecular weight	Not applicable

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: No hazards to be specially mentioned.

Chemical stability: Not applicable

Possibility of hazardous reactions: None known.

Conditions to avoid: None known.

Incompatible materials: None.

Hazardous decomposition products
No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Acute toxicity

Acute oral toxicity
No adverse effects are anticipated

Acute dermal toxicity
No adverse effects are anticipated

Acute inhalation toxicity
No adverse effects are anticipated

Skin corrosion/irritation
Essentially nonirritating to skin.

Serious eye damage/eye irritation
Essentially nonirritating to eyes.

Sensitization
Not classified

Specific Target Organ Systemic Toxicity (Single Exposure)
Not applicable

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Not applicable

Carcinogenicity
Not classifiable as a human carcinogen.

Teratogenicity
Not Classified

Reproductive toxicity
Not Classified

Mutagenicity
Not Classified

Aspiration Hazard
Not applicable

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Toxicity

Acute toxicity to fish
Not expected to be acutely toxic to aquatic organisms.

Persistence and degradability
No data available.

Bioaccumulative potential

Bioaccumulation: Not applicable

Mobility in soil
No data available.

13. DISPOSAL CONSIDERATIONS

Disposal methods: Dispose in accordance with all local, state (provincial), and federal regulations. If treated with a seed treatment, dispose of any remaining product per container disposal instructions.

14. TRANSPORT INFORMATION

DOT

Not regulated for transport

Classification for SEA transport (IMO-IMDG):

Not regulated for transport

Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

Federal Insecticide, Fungicide and Rodenticide Act

EPA Registration Number: 29964-3
This plant incorporated protectant (PIP) is 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.
Cry1F protein has been granted an exemption from the requirement of a tolerance by EPA: 40 CFR Sect 174.504.

16. OTHER INFORMATION

Revision
Identification Number: 011000010641 / Issue Date: 07/15/2020 / Version: 1.0
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Information Source and References
This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

Pioneer Hi-Bred International, Inc. urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.
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