



Safety Data Sheet – Optimum® AcreMax® Insect Protection

Compilation Date: June 1, 2015



*N/AP represents information that is not applicable for this particular product.

N/AV represents information that is not available for this particular product.

Section 1: Identification

1.1 Product identifier	Optimum® AcreMax® Insect Protection
1.2 Relevant identified uses of the substance or mixture and uses advised against	
<i>Recommended use</i>	N/AP
<i>Restrictions on use</i>	N/AP
1.3 Details of the supplier of the safety data sheet	Pioneer Hi-Bred International, Inc. 7250 NW 62 nd Avenue Johnston, IA 50131
1.4 Emergency telephone number	1-800-342-7123

Section 2: Hazard(s) Identification

2.1 Classification of the substance or mixture	Not applicable
2.2 Label Elements	
<i>Pictogram</i>	Not applicable
<i>Signal word</i>	Not applicable
<i>Hazard statement(s)</i>	This product is a non-hazardous material.
<i>Precautionary statement(s)</i>	No special precautions.
2.3 Other hazards	N/AP

Section 3: Composition/Information on Ingredients

3.1 Substances	<i>Bacillus thuringiensis</i> Cry1F and Cry1Ab Corn Seed
3.2 Mixtures	
<i>Ingredient #1:</i>	
<i>Chemical name</i>	N/AP
<i>Common name and synonyms</i>	<i>Bacillus thuringiensis</i> var. <i>aizawai</i> Cry1F protein and the genetic material (PHI8999A) necessary for its production in corn event DAS-Ø15Ø7-1
<i>CAS number (and other unique identifiers)</i>	6481
<i>Impurities and stabilizing additives</i>	N/AP
<i>Concentration</i>	N/AP
<i>Ingredient #2:</i>	
<i>Chemical name</i>	N/AP
<i>Common name and synonyms</i>	<i>Bacillus thuringiensis</i> subsp. <i>Kurstaki</i> Cry1Ab protein and the genetic material (PV-ZMBK07) necessary for its production in corn event MON-ØØ81Ø-6
<i>CAS number (and other unique identifiers)</i>	6526
<i>Impurities and stabilizing additives</i>	N/AP
<i>Concentration</i>	N/AP

Section 4: First Aid Measures

4.1 Description of first aid measures	No need for first aid is anticipated
4.2 Most important symptoms and effects, both acute and delayed	N/AP
4.3 Indication of any immediate medical attention and special treatment needed	N/AP

Section 5: Firefighting Measures

5.1 Extinguishing media	Use extinguishing media appropriate for surrounding fire.
5.2 Special hazards arising from the substance or mixture	None
5.3 Advice for firefighters	None

Section 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures	None required.
6.2 Environmental precautions	None required.
6.3 Methods and material for containment and cleaning up	Non-hazardous material. If material is spilled, sweep up and dispose in accordance with all applicable federal, state and local environmental regulations.
6.4 Reference to other sections	N/AP

Section 7: Handling and Storage

7.1 Precautions for safe handling	Keep in original packaging, tightly closed in a safe place. Retain original product labeling.
7.2 Conditions for safe storage, including any incompatibilities	Store with low humidity at or below 50% and 50 degrees F to maintain seed viability for 4-6 years. Combustible material; keep away from heat and flames.
7.3 Specific end use(s)	Use in accordance with product labeling.

Section 8: Exposure Controls/Personal Protection

8.1 Control parameters	<i>OSHA PELs</i> <i>ACGIH TLVs</i>	N/AP N/AP
8.2 Exposure controls	<i>Engineering controls</i> <i>PPE</i>	N/AP None required.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties	
<i>Appearance</i>	Corn seed
<i>Upper/lower flammability or explosive limits</i>	N/AP
<i>Odor</i>	No obvious odor.
<i>Vapor pressure</i>	N/AP
<i>Odor threshold</i>	N/AP
<i>Vapor density</i>	N/AP
<i>pH</i>	N/AP
<i>Relative density</i>	N/AP
<i>Specific gravity</i>	~1.26
<i>Melting point/freezing point</i>	N/AP
<i>Solubility(ies)</i>	N/AP
<i>Initial boiling point and boiling range</i>	N/AP
<i>Flash point</i>	N/AP
<i>Evaporation rate</i>	N/AP
<i>Flammability (solid, gas)</i>	N/AP
<i>Partition coefficient: n-octanol/water</i>	N/AP
<i>Auto-ignition temperature</i>	N/AP
<i>Decomposition temperature</i>	N/AP
<i>Viscosity</i>	N/AP
<i>Explosive properties</i>	N/AP
<i>Oxidizing properties</i>	N/AP
9.2 Other information	N/AP

Section 10: Stability and Reactivity

10.1 Reactivity	Material is non-reactive.
10.2 Chemical stability	N/AP
10.3 Possibility of hazardous reactions	N/AP
10.4 Conditions to avoid	N/AP
10.5 Incompatible materials	N/AP
10.6 Hazardous decomposition products	None known.

Section 11: Toxicological Information

11.1 Information on toxicological effects	None observed.
--	----------------

Section 12: Ecological Information

12.1 Toxicity	Cry1F: Ingestion LD50 (Mouse) >5050 mg/kg Cry1Ab: Ingestion LD50 (Mouse) >4000 mg/kg Acute toxicity data generated on comparable <i>Bacillus thuringiensis</i> microbial toxins have produced results that demonstrate no toxicity to non-target insects, fish, and avian species.
12.2 Persistence and degradability	N/AP
12.3 Bioaccumulative potential	N/AP
12.4 Mobility in soil	N/AP
12.5 Results of PBT and vPvB assessment	N/AP
12.6 Other adverse effects	N/AP

Section 13: Disposal Considerations

13.1 Waste treatment methods	Dispose of material within all applicable federal, state, and local environmental regulations.
-------------------------------------	--

Section 14: Transport Information

14.1 UN number	N/AP
14.2 UN proper shipping name	N/AP
14.3 Transport hazard class(es)	N/AP
14.4 Packing group	N/AP
14.5 Environmental hazards	N/AP
14.6 Special precautions for user	N/AP
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	N/AP

Section 15: Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture	EPA Registration Number: 29964-12
15.2 Chemical safety assessment	Cry1F and Cry1Ab proteins have been granted exemption from the requirement of a tolerance by EPA: 40 CFR Sect 174.504 and 174.511 respectively.

Section 16: Other Information

N/AP