

Section 1: Identification

1.1 Product identifier	PIONEER® brand 1189 Silage Inoculant – Global Formula. As packaged in 10kg or 25lb bags.
1.2 Relevant identified uses of the substance or mixture and uses advised against <i>Recommended use</i> <i>Restrictions on use</i>	Granular Forage Additive for Silage N/AV
1.3 Details of the supplier of the safety data sheet	Corteva Agriscience 7100 N.W. 62 nd Ave. P.O. Box 1014 Johnston, IA 50131-1014
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> <i>Signal word</i> <i>Hazard statement(s)</i> <i>Precautionary statement(s)</i>	Not applicable Not applicable Product is not considered a hazardous substance according to OSHA 29 CFR 1910.1200. N/AP
2.3 Other hazards	Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep container tightly closed. Wearing gloves, long sleeves, appropriate eye protection (goggles, foam seal safety glasses, etc.) and appropriate dust mask respirator are recommended to avoid dust irritation. Do not breathe dust. Use only outdoors or in a well-ventilated area.

Section 3: Composition/Information on Ingredients

3.1 Substances	N/AP
3.2 Mixtures <i>Ingredient #1: Lactobacillus plantarum</i> <i>CAS number (and other unique identifiers)</i> <i>Impurities and stabilizing additives</i>	N/AP N/AP

Ingredient #2: Enterococcus faecium CAS number (and other unique identifiers) N/AP Impurities and stabilizing additives N/AP Concentration Not less than 8.0 x 10 ⁷ colony forming units (CFU) per gram.
Ingredient #3: Calcium Carbonate Common name and synonyms Limestone CAS number (and other unique identifiers) 1317-65-3 Impurities and stabilizing additives N/AP Concentration 92%
Ingredient #4: Sodium Aluminosilicate Common name and synonyms Stabilizer CAS number (and other unique identifiers) 1344-009 Impurities and stabilizing additives N/AP Concentration 0.5%

Section 4: First Aid Measures

4.1 Description of first aid measures	Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice if symptoms persist or develop. Skin contact: In case of contact, immediately flush skin with plenty of water and soap if available. Seek medical advice if symptoms persist or develop. Eye contact: Remove contact lenses. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek medical advice if symptoms persist or develop. Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Rinse mouth and throat thoroughly with water. Never give anything by mouth to an unconscious person. Seek medical advice if symptoms persist or develop.
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	Non-hazardous, use extinguishing agents suitable to 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
6.2 Environmental precautions	None
6.3 Methods and material for containment and cleaning up	Non-hazardous. Dispose of contents/containers to approved disposal site in accordance with local, regional, national, and/or international regulations.
6.4 Reference to other sections	If appropriate, refer to sections 8 and 13.

Section 7: Handling and Storage

7.1 Precautions for safe handling	None
7.2 Conditions for safe storage, including any incompatibilities	Keep in original packaging, tightly closed in a safe place. Retain original product labeling. Store at 72 degrees F or below.
7.3 Specific end use(s)	Granular Forage Additive for Silage.

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>	<p>Adequate ventilation.</p> <p>Eye protection: Safety glasses or goggles are recommended to avoid dust irritation.</p> <p>Hand protection: Gloves are recommended to prevent skin contact.</p> <p>Skin and body protection: Long sleeves are recommended to prevent skin contact.</p> <p>Respiratory protection: Appropriate dust mask is recommended to prevent dust inhalation. Avoid breathing dust.</p> <p>Work / Hygiene practices: Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities.</p>

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties	<i>Appearance</i>	Free flowing granules
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<i>Upper/lower flammability or explosive limits</i>	N/AP
<i>Odor</i>	No odor
<i>Vapor pressure</i>	N/AP
<i>Odor threshold</i>	N/AP
<i>Vapor density</i>	N/AP
<i>pH</i>	7.5-9.0 (in 10% solution)
<i>Relative density</i>	N/AP
<i>Specific gravity</i>	N/AP
<i>Melting point/freezing point</i>	N/AP
<i>Solubility(ies)</i>	Not Soluble
<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	N/AP
10.2 Chemical stability	Stable under normal conditions
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	N/AP

Section 11: Toxicological Information

11.1 Information on toxicological effects	<p>According to Directive 2000/54/EC, product is classified in group 1 (unlikely to cause human disease).</p> <p>Effects of short-term exposure: Repeated inhalation of powder may cause sensitization and may cause allergic type reactions in sensitized individuals.</p> <p>Effects of long-term exposure: Repeated inhalation of powder may cause sensitization and may cause allergic type reactions in sensitized individuals.</p> <p>Irritancy: N/AV</p> <p>Sensitization: Possible allergic sensitization (see Section 2)</p> <p>Allergy: N/AV</p> <p>Carcinogenicity: N/AV</p> <p>Reproductive toxicity: N/AV</p> <p>Teratogenicity: N/AV</p> <p>Mutagenicity: N/AV</p> <p>Toxicology synergistic products: N/AV</p>
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Section 12: Ecological Information

12.1 Toxicity	N/AV
12.2 Persistence and degradability	N/AV
12.3 Bioaccumulative potential	N/AV
12.4 Mobility in soil	N/AV
12.5 Results of PBT and vPvB assessment	N/AV
12.6 Other adverse effects	Adopt good working practices so that the product is not released into the environment. No ecological information is available. The substance is unlikely to have a significant effect on the environment.

Section 13: Disposal Considerations

13.1 Waste treatment methods	Non-hazardous. Dispose of contents/containers to approved disposal site in accordance with local, regional, national, and/or international regulations.
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Section 14: Transport Information

14.1 UN number	N/AV
14.2 UN proper shipping name	N/AV
14.3 Transport hazard class(es)	Not classified as dangerous in the meaning of transport regulations.
14.4 Packing group	N/AV
14.5 Environmental hazards	N/AV
14.6 Special precautions for user	N/AV
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	N/AP
15.2 Chemical safety assessment	N/AP

Section 16: Other Information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use processing, storage, transportation, disposal, and release is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Revision Date: May 4, 2020.

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