Safety Data Sheet - GHS

1. IDENTIFICATION: CHEMICAL PRODUCT AND COMPANY

PRODUCT NAME: Maverick™ Corn Herbicide
EPA REGISTRATION NUMBER: 59639-255
VC NUMBER(S): 2152, 2161, 2162, 2169, 2181, 2182
PRODUCT CODE: None

MANUFACTURER/DISTRIBUTOR
VALENT U.S.A. LLC
P.O. Box 5075
4600 Norris Canyon Road
San Ramon, CA 94583

EMERGENCY TELEPHONE NUMBERS
HEALTH EMERGENCY OR SPILL (24 hr):
(800) 892-0099
TRANSPORTATION (24 hr.): CHEMTREC
(800) 424-9300 or (202) 483-7616

PRODUCT INFORMATION
AGRICULTURAL PRODUCTS: (800) 682-5368

2. HAZARDS IDENTIFICATION

Classification - (per U.S. OSHA 29 CFR 1910.1200 (Hazcom 2012))

Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Specific Target Organ Toxicity – Repeated Exposure (Nervous system, liver, kidney, heart and urinary bladder)	Category 2

Label elements

Signal Word

WARNING

Hazard statements
Harmful if inhaled.
May cause damage to nervous system, liver, kidney, heart, urinary bladder through prolonged or repeated exposure.

Precautionary statements

Prevention
Do not breathe mists, vapors or spray.
Use only outdoors or in a well-ventilated area.
Wash hands and face thoroughly after handling.
Do not eat, drink or smoke when using this product.
Avoid release to the environment.

Response
IF EXPOSED OR CONCERNED: Get medical help immediately.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

Storage
Store locked up.

Disposal
Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC)
Very toxic to aquatic life.
Very toxic to aquatic life with long lasting effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Weight-%
Mesotrione	104206-82-8	8.91
Clopyralid	1702-17-6	5.65
Pyroxasulfone	447399-55-5	7.45
Other Ingredients	Multiple	77.99

Specific information on other ingredients for the management of exposures, spills, or safety assessments can be obtained by a treating physician or nurse by calling **(800) 892-0099** at any time.

4. FIRST AID MEASURES

EMERGENCY NUMBER (800) 892-0099

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 poison control center or doctor for treatment advice.

SKIN CONTACT:
Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

INGESTION:
Do not give any liquid to the person. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person. If symptoms develop, get medical advice.

INHALATION:
Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

NOTES TO PHYSICIAN:
None

5. FIRE FIGHTING MEASURES

Flash point °C	Not Determined
Flash point °F	Not Determined
EXTINGUISHING MEDIA:	Use extinguishing media suitable for surrounding materials. Dry chemical, carbon dioxide, foam, water spray or fog.

FIRE FIGHTING INSTRUCTIONS: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH approved (or equivalent) and full protective gear. Evacuate area and fight fire upwind from a safe distance to avoid hazardous vapors and decomposition products. Dike and collect water used to fight fire to prevent environmental damage due to run off.

HAZARDOUS DECOMPOSITION PRODUCTS: May produce gases such as fluorine compounds, and oxides of carbon and nitrogen.

6. ACCIDENTAL RELEASE MEASURES

VALENT EMERGENCY PHONE NUMBER: (800) 892-0099
CHEMTREC EMERGENCY PHONE NUMBER: (800) 424-9300

Personal Precautions: Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

Environmental Precautions: Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.

Methods for Containment: Dike spill using absorbent or impervious materials such as earth, sand or clay. Collect and contain contaminated absorbent and dike material for disposal.

Methods for Cleanup and Disposal: Pump free liquid into an appropriate container. Absorb residual with inert absorbent material. Wash entire spill area with a detergent slurry, absorb and sweep into container for disposal. Decontaminate tools and equipment following cleanup. See Section 13: DISPOSAL CONSIDERATIONS for more information.

7. HANDLING AND STORAGE

HANDLING: Avoid contact with eyes, skin or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and change into clean clothing.

STORAGE: Keep pesticide in original container. Store in a cool, dry, secure place. Do not put formulation or dilute spray solution into food or drink containers. Do not contaminate food or foodstuffs. Do not store or transport near feed or food. Not for use or storage in or around the home. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS

Chemical name	ACGIH Exposure Limits	OSHA Exposure Limits	Other Exposure Limits (Specify)
Dipropylene glycol monomethyl ether	TWA: 100 ppm STEL: 150 ppm	None	None
Phosphoric acid	TWA: 1 mg/m^3	None	None
Sodium hydroxide	TWA: 2mg/m^3	None	None
Monoethanolamine	TWA: 3 ppm	None	None
Octamethylcyclotetrasiloxane	None	None	TWA: 10 ppm (US WEEL)

ENGINEERING CONTROLS: Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.

Eye/Face Protection: To avoid contact with eyes, wear goggles or safety glasses.

Skin Protection: To avoid contact with skin wear long-sleeved shirt and long pants, shoes plus socks, and chemical-resistant gloves made of any waterproof material. Washing facilities should be readily accessible to the work area.

Respiratory Protection: Not normally required. If vapors or mists or dusts exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.

General Hygiene Considerations: Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored; 2) wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:		**Vapor pressure**	Not determined
Physical State	Liquid	**Vapor density**	Not determined
Color	White	**Specific Gravity**	Not determined
Odor	Sweet almond odor	**Water solubility**	Not determined
pH	3.13 (1% w/w)	**Solubility in other solvents**	Not determined
Melting point / freezing point	Not determined	**Partition coefficient**	Not determined
Boiling point / boiling range	Not determined	**Autoignition temperature**	Not determined
Flash point	Not determined	**Decomposition temperature**	Not determined
Evaporation rate	Not determined	**Viscosity**	111 cP @20°C 95.6 cP @40°C
Flammability (solid, gas)	Not determined	**Explosive properties**	Not determined
Flammability Limits in Air:		**Oxidizing properties**	Not determined
Upper flammability limits	Not determined	**Liquid Density**	Not determined
Lower flammability limits	Not determined	**Relative density**	1.12 g/cm^3

10. STABILITY AND REACTIVITY

Reactivity
Not reactive.

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
Hazardous polymerization will not occur.

Conditions to avoid
Excessive heat. Do not store near heat or flame.

Incompatible materials
Strong oxidizing agents, such as chlorates, nitrates, and peroxides.

Hazardous Decomposition Products
Under fire conditions, may produce gases such as fluorine compounds, and oxides of carbon and nitrogen.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Oral Toxicity LD $_{50}$ (rats)	>5000 mg/kg	EPA Tox Category	IV
Dermal Toxicity LD $_{50}$ (rabbits)	>5000 mg/kg	EPA Tox Category	IV

Inhalation Toxicity LC_{50} (rats)	>2.19 mg/L (4 h)	EPA Tox Category	IV
Eye Irritation (rabbits)	Mildly irritating (MMTS=6.0); resolved within 72 hrs	EPA Tox Category	IV
Skin Irritation (rabbits)	Slightly irritating (PDII=6.0); resolved within 72 hrs	EPA Tox Category	IV
Skin Sensitization (guinea pigs)	Non-sensitizer	EPA Tox Category	Not applicable

MESOTRIONE TECHNICAL

CHRONIC/CARCINOGENICITY**:** Mesotrione Technical is classified as "not likely to be carcinogenic to humans" by all routes of exposure based upon lack of evidence of carcinogenicity in rats and mice. Chronic toxicity was not observed in the mouse at the highest dose tested, 1494.5 mg/kg bw/day.

DEVELOPMENTAL TOXICITY: Mesotrione Technical was not associated with developmental toxicity in the mouse up to 600 mg/kg bw/day. Delayed ossification was observed in the rabbit at maternally toxic dose of 100 mg/kg bw/d.

REPRODUCTION: Offspring toxicity was observed in F2 pups effecting the eyes in the mouse at the highest dose tested, 306.7 mg/kg bw/d. There were no effects on reproduction up to 1,652 mg/kg/d.

MUTAGENICITY: Mesotrione was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

CLOPYRALID TECHNICAL

CHRONIC/CARCINOGENICITY**:** Clopyralid is classified as "not likely to be carcinogenic to humans" by all routes of exposure based upon lack of evidence of carcinogenicity in rats and mice. NOAELs following chronic administration by feed in rats and mice were 15 mg/kg bw/d and 500 mg/ kg bw/d, respectively.

DEVELOPMENTAL TOXICITY: Clopyralid Technical was associated with developmental effects in the rabbit at 250 mg/kg bw/d, with a NOAEL of 110 mg/ kg bw/d. No developmental effects were observed in the rat at the highest dose tested, 250 mg/kg bw/d.

REPRODUCTION: In a reproduction study in the rat with clopyralid, no reproductive effects were observed at the highest dose tested, 1,500 mg/kg bw/d. However, the study NOAEL was 500 mg/kg bw/d based on offspring effects observed at 1,500 mg/kg bw/d.

MUTAGENICITY: Clopyralid was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

PYROXASUFONE TECHNICAL

CHRONIC/CARCINOGENICITY**:** Pyroxasulfone is classified as **"**Not Likely to be Carcinogenic to Humans**"** at doses that do not cause urinary tract toxicity, < 42.55 mg/kg bw/d. NOAELs in the rat and mouse are 3.12 mg/kg bw/d and 18.4 mg/kg bw/d, respectively, based on systemic toxicity observed at higher doses

DEVELOPMENTAL TOXICITY: Pyroxasulfone Technical was not associated with developmental toxicity in rats up to the highest dose tested, 1,000 mg/kg bw/d. However, in rabbits, decreased fetal weights and resorptions were observed at this high dose, therefore the NOAEL in rabbits was 500 mg/kg bw/d.

REPRODUCTION: Parental and offspring toxicity were observed in the rat reproduction study at 144 mg/kg bw/day, with a corresponding NOAEL of 7.2 mg/kg bw/d.

MUTAGENICITY: Pyroxasulfone was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

12. ECOLOGICAL INFORMATION

AQUATIC ORGANISM TOXICITY:

Mesotrione Technical
Rainbow Trout: LC_{50} >120 mg/L (96-hr)
Bluegill Sunfish: LC_{50} >120 mg/L (96-hr)
Daphnia: EC_{50} 900 mg/L (48-hr, Static)
Algae, Green (Selenastum capricornutum): EC50 4.5 mg/L (120-hr, static)
Lemna gibba: LC_{50} 0.0077 mg/L (14-day)

Clopyralid Technical
Rainbow Trout: LC_{50} >99.9 mg/L (96-hr, static)
Bluegill Sunfish: LC_{50} >102 mg/L (96-hr)
Daphnia: EC_{50} > 99 mg/L (48-hr, Static)
Algae, Green (Pseudokirchneriella subcapitata): ErC50 33.1 mg/L (96-hr, growth rate inhibition)

Pyroxasulfone Technical
Rainbow Trout: LC_{50} >2.2 mg/L (96-hr)
Bluegill Sunfish: LC_{50} >2.8 mg/L (96-hr)
Sheepshead minnow: LC_{50} >3.3 mg/L (96-hr)
Daphnia: LC_{50} >4.4 mg/L (48-hr)
Algae, Green: ErC_{50} 0.000743 mg/L (72-hr)
Lemna gibba: EC_{50} 0.0055 mg/L (7-day)

OTHER NON-TARGET ORGANISM TOXICITY:

Clopyralid Technical
Bees (Oral): LD_{50} >100 µg/bee
(Contact): LD_{50} >98.1 µg/bee

Pyroxasulfone Technical
Honeybee (Acute Contact): LD_{50} >100 µg/bee (48-hr)

13. DISPOSAL CONSIDERATIONS

PRODUCT DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling, if available; otherwise dispose of in a sanitary landfill or incineration, or if allowed by State and local authorities, by burning. If burned, stay out of the smoke.

DISPOSAL METHODS: Check government regulations and local authorities for approved disposal of this material. Dispose of in accordance with applicable laws and regulations.

14. TRANSPORTATION INFORMATION

DOT (ground) SHIPPING NAME: Not regulated for domestic ground transport by US DOT.
EMERGENCY RESPONSE Not applicable

ICAO/IATA SHIPPING NAME: UN 3082 Environmentally Hazardous Substance, Liquid, N.O.S. (Mestrione, Clopyralid, Pyroxasulfone), 9, III, Marine Pollutant
REMARKS: Single or inner packaging less than 5 L (liquid) or 5 Kg net (solids) excepted from Dangerous Goods regulations -- see IATA Special Provision A197

IMDG SHIPPING NAME: UN 3082 Environmentally Hazardous Substance, Liquid, N.O.S. (Mestrione, Clopyralid, Pyroxasulfone), 9, III, Marine Pollutant
REMARKS: Single or inner packaging less than 5 L (liquid) or 5 Kg net (solids) excepted from Dangerous Goods regulations – see IMDG 2.10.2.7

15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: Ingredients in this product are reviewed against an inclusive list of federal regulations. Therefore, the user should consult appropriate authorities. The federal regulations reviewed include: Clean Water Act, SARA, CERCLA, RCRA, DOT, TSCA and OSHA. If no components or information is listed in the space below this paragraph, then none of the regulations reviewed are applicable.

STATE REGULATIONS: Each state may promulgate standards more stringent than the federal government. This section cannot encompass an inclusive list of all state regulations. Therefore, the user should consult state or local authorities.

New Jersey State-Right-To-Know

Propylene Glycol	CAS# 57-55-6

Pennsylvania State-Right-To-Know

Propylene Glycol	CAS# 57-55-6
Oxydipropanol	CAS# 25265-71-8
1,2-Benzisothiazol-3(2H)-one	CAS# 2634-33-5
Sodium hydroxide	CAS# 1310-73-2
Monoethanolamine	CAS# 141-43-5
Dimethyl siloxane, tri,ethylsiloxy-terminated	CAS# 63148-62-9
Benzoic acid	CAS# 65-85-0

Massachusetts State-Right-To-Know

Sodium hydroxide	CAS# 1310-73-2

16. OTHER INFORMATION

REASON FOR ISSUE:	Update product name, EPA Registration number, and VC numbers
SDS NO.:	0572
EPA REGISTRATION NUMBER:	59639-255
REVISION NUMBER:	2
REVISION DATE:	06/07/2022
SUPERCEDES DATE:	07/01/2021
RESPONSIBLE PERSON(S):	Valent U.S.A. LLC, Corporate EH&S

The information provided in this Safety Data Sheet (SDS) is provided in good faith and believed to be accurate at the time of preparation of the SDS. However, to the extent consistent with applicable law, Valent U.S.A. LLC and its subsidiaries or affiliates extend no warranties, make no representations, and assume no responsibility as to the accuracy, suitability, or completeness of such information. Additionally, to the extent consistent with applicable law, neither Valent U.S.A. LLC nor any of its subsidiaries or affiliates represents or guarantees that this information or product may be used without infringing the intellectual property rights of others. Except to the extent a particular use and particular information are expressly stated on the product label, it is the users' own responsibility to determine the suitability of this information for their own particular use of this product. If necessary, contact Valent U.S.A. LLC to confirm that you have the most current product label and SDS.

This Safety Data Sheet (SDS) may provide more information than the product label but does not replace or modify the product labeling (attached to and accompanying the product container). The product SDS and the product label both provide consistent and important health, safety, and environmental information as required by the Occupational Health and Safety Act (29 CFR 1910.1200, “Hazcom”). This requirement covers employers, employees, emergency responders, users and others handling the product. All necessary hazard classification and appropriate precautionary, use, storage, and disposal information is set forth on the labeling and the SDS.