



We create chemistry

Safety Data Sheet

Clearcast Herbicide

Revision date : 2022/04/18
Version: 8.0

Page: 1/12
(30277923/SDS CPA US/EN)

1. Identification

Product identifier used on the label

Clearcast Herbicide

Recommended use of the chemical and restriction on use

Recommended use*: crop protection product, herbicide

* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:

BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Substance number:	136003
Registration number:	EPA Registration number: 241-437
Molecular formula:	C ₁₅ H ₁₈ N ₃ O ₄ · N H(4)
Chemical family:	imidazole derivative
Synonyms:	ammonium salt of imazamox

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard: 29 CFR Part 1910.1200

Label elements

The product does not require a hazard warning label in accordance with GHS criteria.

Safety Data Sheet

Clearcast Herbicide

Revision date : 2022/04/18
Version: 8.0

Page: 2/12
(30277923/SDS CPA US/EN)

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

ammonium salt of imazamox (active ingredient)
CAS Number: 247057-22-3
Content (W/W): 12.1 %
Synonym: No data available.

4. First-Aid Measures

Description of first aid measures

General advice:

First aid providers should wear personal protective equipment to prevent exposure. Remove contaminated clothing. Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. In case of intoxication, call a poison control center or physician for treatment advice, taking the packaging or the label of the product.

If inhaled:

Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary.

If on skin:

Rinse skin immediately with plenty of water for 15 - 20 minutes.

If in eyes:

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

If swallowed:

Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

Most important symptoms and effects, both acute and delayed

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11., (Further) symptoms and / or effects are not known so far

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Safety Data Sheet

Clearcast Herbicide

Revision date : 2022/04/18
Version: 8.0

Page: 3/12
(30277923/SDS CPA US/EN)

Suitable extinguishing media:
foam, dry powder, carbon dioxide, water spray

Special hazards arising from the substance or mixture

Hazards during fire-fighting:

carbon monoxide, carbon dioxide, nitrogen oxides, sulfur oxides

If product is heated above decomposition temperature, toxic vapours will be released. The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:

Evacuate area of all unnecessary personnel. Contain contaminated water/firefighting water. Do not allow to enter drains or waterways.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Take appropriate protective measures. Clear area. Shut off source of leak only under safe conditions. Extinguish sources of ignition nearby and downwind. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

Environmental precautions

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water.

Methods and material for containment and cleaning up

Dike spillage. Pick up with suitable absorbent material. Place into suitable containers for reuse or disposal in a licensed facility. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

7. Handling and Storage

Precautions for safe handling

RECOMMENDATIONS ARE FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS. PESTICIDE APPLICATORS & WORKERS must refer to the Product Label and Directions for Use attached to the product for Agricultural Use Requirements in accordance with the EPA Worker Protection Standard 40 CFR part 170. Ensure adequate ventilation. Provide good ventilation of working area (local exhaust ventilation if necessary). Keep away from sources of ignition - No smoking. Keep container tightly sealed. Protect contents from the effects of light. Protect against heat. Protect from air. Handle and open container with care. Do not open until ready to use. Once container is opened, content should be used as soon as possible. Avoid aerosol formation. Avoid dust formation. Provide means for controlling leaks and spills. Do not return residues to the storage containers. Follow label warnings even after container is emptied. The substance/ product may be handled only by appropriately trained personnel. Avoid all direct contact with the substance/product. Avoid contact with the skin, eyes and clothing. Avoid inhalation of dusts/mists/vapours. Wear suitable personal protective clothing and equipment.

Protection against fire and explosion:

Safety Data Sheet

Clearcast Herbicide

Revision date : 2022/04/18
Version: 8.0

Page: 4/12
(30277923/SDS CPA US/EN)

The relevant fire protection measures should be noted. Fire extinguishers should be kept handy. Avoid all sources of ignition: heat, sparks, open flame. Sources of ignition should be kept well clear. Avoid extreme heat. Keep away from oxidizable substances. Electrical equipment should conform to national electric code. Ground all transfer equipment properly to prevent electrostatic discharge. Electrostatic discharge may cause ignition.

Conditions for safe storage, including any incompatibilities

Segregate from incompatible substances. Segregate from foods and animal feeds. Segregate from textiles and similar materials.

Further information on storage conditions: Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect containers from physical damage. Protect against contamination. The authority permits and storage regulations must be observed.

Storage stability:

If substance/product crystallizes, thaw at room temperature.

Protect from temperatures below: 0 °C

Changes in the properties of the product may occur if substance/product is stored below indicated temperature for extended periods of time.

Protect from temperatures above: 40 °C

Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

8. Exposure Controls/Personal Protection

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

No occupational exposure limits known.

Advice on system design:

Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

Personal protective equipment

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) TC23C Chemical/Mechanical type filter system to remove a combination of particles, gas and vapours. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:

Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.

Eye protection:

Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Safety Data Sheet

Clearcast Herbicide

Revision date : 2022/04/18

Page: 5/12

Version: 8.0

(30277923/SDS CPA US/EN)

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:

Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment. Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. Personal protective equipment should be decontaminated prior to reuse. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Take off immediately all contaminated clothing. Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift. No eating, drinking, smoking or tobacco use at the place of work. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

Form:	liquid
Odour:	acidic, mild
Odour threshold:	Not determined due to potential health hazard by inhalation.
Colour:	pale yellow, clear
pH value:	approx. 5 - 7 (20 °C)
Freezing point:	approx. 0 °C (1,013.3 hPa)
Boiling point:	Information applies to the solvent. approx. 100 °C (1,013.3 hPa)
Flash point:	Information applies to the solvent. A flash point determination is unnecessary due to the high water content.
Flammability:	not applicable
Lower explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Upper explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Autoignition:	Based on the water content the product does not ignite.
Vapour pressure:	approx. 23.3 hPa (20 °C)
Density:	Information applies to the solvent. 1.0486 g/cm ³ (20 °C) 8.7510 Lb/USg (68 °F)
Vapour density:	not applicable
Partitioning coefficient n-octanol/water (log Pow):	not applicable
Thermal decomposition:	Not a substance liable to self-decomposition according to UN transport regulations, class 4.1.

Safety Data Sheet

Clearcast Herbicide

Revision date : 2022/04/18
Version: 8.0

Page: 6/12
(30277923/SDS CPA_US/EN)

Viscosity, dynamic:	3.7 mPa.s (20 °C)
Solubility in water:	soluble
Evaporation rate:	not applicable
Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals:

Corrosive effects to metal are not anticipated.

Oxidizing properties:

Not an oxidizer.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

The product is chemically stable.

No hazardous reactions if stored and handled as prescribed/indicated.

Conditions to avoid

Avoid all sources of ignition: heat, sparks, open flame. Avoid electro-static charge. Avoid prolonged storage. Avoid contamination. Avoid prolonged exposure to extreme heat. Avoid extreme temperatures.

Incompatible materials

oxidizing agents

Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:

Not a substance liable to self-decomposition according to UN transport regulations, class 4.1.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Relatively nontoxic after single ingestion. Slightly toxic after short-term skin contact. Relatively nontoxic after short-term inhalation.

Safety Data Sheet

Clearcast Herbicide

Revision date : 2022/04/18
Version: 8.0

Page: 7/12
(30277923/SDS CPA_US/EN)

Oral

Type of value: LD50
Species: rat
Value: > 5,000 mg/kg

Inhalation

Type of value: LC50
Species: rat
Value: > 5 mg/l
Exposure time: 4 h
No mortality was observed.

Dermal

Type of value: LD50
Species: rat
Value: > 4,000 mg/kg
No mortality was observed.

Assessment other acute effects

Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

The product has not been tested. The statement has been derived from the properties of the individual components.

Irritation / corrosion

Assessment of irritating effects: May cause slight irritation to the skin. May cause moderate but temporary irritation to the eyes.

Skin

Species: rabbit
Result: non-irritant

Eye

Species: rabbit
Result: non-irritant

Sensitization

Assessment of sensitization: There is no evidence of a skin-sensitizing potential.

modified Buehler test

Species: guinea pig
Result: Non-sensitizing.

Aspiration Hazard

The product has not been tested. The statement has been derived from the properties of the individual components. No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: ammonia

Assessment of repeated dose toxicity: After repeated administration the prominent effect is the induction of corrosion.

Safety Data Sheet

Clearcast Herbicide

Revision date : 2022/04/18
Version: 8.0

Page: 8/12
(30277923/SDS_CPA_US/EN)

Genetic toxicity

Assessment of mutagenicity: The product has not been tested. The statement has been derived from the properties of the individual components. Mutagenicity tests revealed no genotoxic potential.

Carcinogenicity

Assessment of carcinogenicity: The product has not been tested. The statement has been derived from the properties of the individual components. The results of various animal studies gave no indication of a carcinogenic effect.

Reproductive toxicity

Assessment of reproduction toxicity: The product has not been tested. The statement has been derived from the properties of the individual components. The results of animal studies gave no indication of a fertility impairing effect.

Teratogenicity

Assessment of teratogenicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: imazamox

Assessment of teratogenicity: Indications of possible developmental toxicity/teratogenicity were seen in animal studies.

Other Information

Misuse can be harmful to health.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms.

Aquatic plants

EC10 (7 d) 0.040 mg/l (growth rate), Lemna gibba

EC50 (7 d) 0.143 mg/l (growth rate), Lemna gibba

Toxicity to fish

Information on: imazamox

LC50 (96 h) > 122 mg/l, Oncorhynchus mykiss

Aquatic invertebrates

Information on: imazamox

Aquatic plants

Information on: imazamox

Safety Data Sheet

Clearcast Herbicide

Revision date : 2022/04/18

Page: 9/12

Version: 8.0

(30277923/SDS CPA_US/EN)

EC50 (72 h) 29.1 mg/l (growth rate), Pseudokirchneriella subcapitata

EC50 (7 d) 0.0085 mg/l (growth rate), Lemna gibba

EC10 (7 d) 0.0036 mg/l (growth rate), Lemna gibba

Assessment of terrestrial toxicity

With high probability not acutely harmful to terrestrial organisms.

Other terrestrial non-mammals

Information on: 3-Pyridinecarboxylic acid, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-(methoxymethyl)-

LC50, Anas platyrhynchos

LD50 > 100 ug/bee, Apis mellifera

Persistence and degradability

Assessment biodegradation and elimination (H2O)

The product has not been tested. The statement has been derived from the properties of the individual components.

Elimination information

Not readily biodegradable (by OECD criteria).

Assessment biodegradation and elimination (H2O)

Information on: imazamox

Bioaccumulative potential

Assessment bioaccumulation potential

The product has not been tested. The statement has been derived from the properties of the individual components.

Mobility in soil

Assessment transport between environmental compartments

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: imazamox

The substance will not evaporate into the atmosphere from the water surface.

Following exposure to soil, the product trickles away and can - dependant on degradation - be transported to deeper soil areas with larger water loads.

Additional information

Other ecotoxicological advice:

The ecological data given are those of the active ingredient. Do not release untreated into natural waters.

Safety Data Sheet

Clearcast Herbicide

Revision date : 2022/04/18
Version: 8.0

Page: 10/12
(30277923/SDS CPA US/EN)

13. Disposal considerations

Waste disposal of substance:

Pesticide wastes are regulated. Improper disposal of excess pesticide, spray mix or rinsate is a violation of federal law. If pesticide wastes cannot be disposed of according to label instructions, contact the State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container disposal:

Rinse thoroughly at least three times (triple rinse) in accordance with EPA recommendations. Consult state or local disposal authorities for approved alternative procedures such as container recycling. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

RCRA:

This product is not regulated by RCRA.

14. Transport information

Land transport

USDOT

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Hazard class:	9
Packing group:	III
ID number:	UN 3082
Hazard label:	9, EHSM
Marine pollutant:	YES
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains IMAZAMOX)

Air transport

IATA/ICAO

Hazard class:	9
Packing group:	III
ID number:	UN 3082
Hazard label:	9, EHSM
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains IMAZAMOX)

Further information

Product may be shipped as non-hazardous in suitable packages containing a net quantity of 5 L or less under the provisions of various regulatory agencies: ADR, RID, ADN: Special Provision 375; IMDG: 2.10.2.7; IATA: A197; TDG: Special Provision 99(2); 49CFR: §171.4 (c) (2) and also the Special Provision 375 in Appendix B which is regulated in China "Regulations Concerning Road Transportation of Dangerous Goods Part 3: Index of dangerous goods name and transportation requirements" (JT/T 617.3)

Safety Data Sheet

Clearcast Herbicide

Revision date : 2022/04/18
Version: 8.0

Page: 11/12
(30277923/SDS CPA_US/EN)

15. Regulatory Information

Federal Regulations

Registration status:

Crop Protection TSCA, US released / exempt

Chemical TSCA, US blocked / not listed

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:

BASF Risk Assessment, CA Prop. 65:

Based on an evaluation of the product's composition and the use(s), this product does not require a California Proposition 65 Warning.

NFPA Hazard codes:

Health: 1 Fire: 0 Reactivity: 0 Special:

Labeling requirements under FIFRA

This chemical is a pesticide product 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 workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.

CAUTION:

HARMFUL IF ABSORBED THROUGH SKIN.

HARMFUL IF INHALED.

KEEP OUT OF REACH OF CHILDREN.

KEEP OUT OF REACH OF DOMESTIC ANIMALS.

Avoid contact with the skin, eyes and clothing.

Wash thoroughly after handling.

16. Other Information

SDS Prepared by:

BASF NA Product Regulations

SDS Prepared on: 2022/04/18

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

Safety Data Sheet

Clearcast Herbicide

Revision date : 2022/04/18
Version: 8.0

Page: 12/12
(30277923/SDS CPA US/EN)

IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE , IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU MAKE TESTS TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA, AND INFORMATION FURNISHED BY OUR COMPANY HEREUNDER ARE GIVEN GRATIS AND WE ASSUME NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.
END OF DATA SHEET

Safety Data Sheet

Raptor Herbicide

Revision date : 2019/02/14
Version: 5.0

Page: 1/12
(30260311/SDS_CPA_US/EN)

1. Identification

Product identifier used on the label

Raptor Herbicide

Recommended use of the chemical and restriction on use

Recommended use*: crop protection product, herbicide
Recommended use*: herbicide

* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:

BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Substance number:	136003
EPA Registration number:	241-379
Molecular formula:	C ₁₅ H ₁₈ N ₃ O ₄ · N H(4)
Chemical family:	imidazole derivative
Synonyms:	ammonium salt of imazamox

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

No need for classification according to GHS criteria for this product.

Safety Data Sheet

Raptor Herbicide

Revision date : 2019/02/14
Version: 5.0

Page: 2/12
(30260311/SDS CPA_US/EN)

Label elements

The product does not require a hazard warning label in accordance with GHS criteria.

Hazards not otherwise classified

Labeling of special preparations (GHS):

May produce an allergic reaction. Contains: 1,2-benzisothiazol-3(2H)-one

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

<u>CAS Number</u>	<u>Weight %</u>	<u>Chemical name</u>
247057-22-3	12.1 %	ammonium salt of imazamox (active ingredient)

4. First-Aid Measures

Description of first aid measures

General advice:

First aid providers should wear personal protective equipment to prevent exposure. Remove contaminated clothing. Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. In case of intoxication, call a poison control center or physician for treatment advice, taking the packaging or the label of the product.

If inhaled:

Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary.

If on skin:

Rinse skin immediately with plenty of water for 15 - 20 minutes.

If in eyes:

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

If swallowed:

Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

Most important symptoms and effects, both acute and delayed

Symptoms: (Further) symptoms and / or effects are not known so far

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment: Symptomatic treatment (decontamination, vital functions).

Safety Data Sheet

Raptor Herbicide

Revision date : 2019/02/14

Version: 5.0

Page: 3/12

(30260311/SDS CPA US/EN)

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
foam, dry powder, carbon dioxide, water spray

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
carbon monoxide, carbon dioxide, nitrogen oxide, nitrogen dioxide, Ammonium, To be archived:
Hydrocarbons,
If product is heated above decomposition temperature, toxic vapours will be released. The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:

Evacuate area of all unnecessary personnel. Contain contaminated water/firefighting water. Do not allow to enter drains or waterways.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Take appropriate protective measures. Clear area. Shut off source of leak only under safe conditions. Extinguish sources of ignition nearby and downwind. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

Environmental precautions

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water.

Methods and material for containment and cleaning up

Dike spillage. Pick up with suitable absorbent material. Place into suitable containers for reuse or disposal in a licensed facility. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

7. Handling and Storage

Precautions for safe handling

RECOMMENDATIONS ARE FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS. PESTICIDE APPLICATORS & WORKERS must refer to the Product Label and Directions for Use attached to the product for Agricultural Use Requirements in accordance with the EPA Worker Protection Standard 40 CFR part 170. Ensure adequate ventilation. Provide good ventilation of working area (local exhaust ventilation if necessary). Keep away from sources of ignition - No smoking. Keep container tightly sealed. Protect contents from the effects of light. Protect against heat. Protect from air. Handle and open container with care. Do not open until ready to use. Once container is opened, content should be used as soon as possible. Avoid aerosol formation. Avoid dust formation. Provide means for controlling leaks and spills. Do not return residues to the storage containers. Follow label warnings even after container is emptied. The substance/ product may be handled only by appropriately trained personnel. Avoid all direct contact

Safety Data Sheet

Raptor Herbicide

Revision date : 2019/02/14
Version: 5.0

Page: 4/12
(30260311/SDS CPA US/EN)

with the substance/product. Avoid contact with the skin, eyes and clothing. Avoid inhalation of dusts/mists/vapours. Wear suitable personal protective clothing and equipment.

Protection against fire and explosion:

The relevant fire protection measures should be noted. Fire extinguishers should be kept handy. Avoid all sources of ignition: heat, sparks, open flame. Sources of ignition should be kept well clear. Avoid extreme heat. Keep away from oxidizable substances. Electrical equipment should conform to national electric code. Ground all transfer equipment properly to prevent electrostatic discharge. Electrostatic discharge may cause ignition.

Conditions for safe storage, including any incompatibilities

Segregate from incompatible substances. Segregate from foods and animal feeds. Segregate from textiles and similar materials.

Further information on storage conditions: Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect containers from physical damage. Protect against contamination. The authority permits and storage regulations must be observed.

Storage stability:

If substance/product crystallizes, thaw at room temperature.

Protect from temperatures below: 0 °C

Changes in the properties of the product may occur if substance/product is stored below indicated temperature for extended periods of time.

Protect from temperatures above: 40 °C

Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

8. Exposure Controls/Personal Protection

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

No occupational exposure limits known.

Advice on system design:

Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

Personal protective equipment

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) TC23C Chemical/Mechanical type filter system to remove a combination of particles, gas and vapours. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:

Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.

Safety Data Sheet

Raptor Herbicide

Revision date : 2019/02/14

Version: 5.0

Page: 5/12

(30260311/SDS CPA US/EN)

Eye protection:

Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:

Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment. Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. Personal protective equipment should be decontaminated prior to reuse. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Take off immediately all contaminated clothing. Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift. No eating, drinking, smoking or tobacco use at the place of work. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

Form:	liquid
Odour:	acidic, mild
Odour threshold:	Not determined due to potential health hazard by inhalation.
Colour:	pale yellow, clear
pH value:	approx. 5 - 7 (20 °C)
Freezing point:	approx. 0 °C (1,013.3 hPa)
Boiling point:	Information applies to the solvent. approx. 100 °C (1,013.3 hPa)
Flash point:	Information applies to the solvent. A flash point determination is unnecessary due to the high water content.
Flammability:	not applicable
Lower explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Upper explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Autoignition:	Based on the water content the product does not ignite.
SADT:	Not a substance liable to self-decomposition according to UN transport regulations, class 4.1. Heat accumulation / Dewar 500 ml (SADT, UN-Test H.4, 28.4.4)
Vapour pressure:	approx. 23.3 hPa (20 °C) Information applies to the solvent.

Safety Data Sheet

Raptor Herbicide

Revision date : 2019/02/14
Version: 5.0

Page: 6/12
(30260311/SDS CPA US/EN)

Density:	1.0486 g/cm ³ (20 °C) 8.7510 Lb/USg (68 °F)
Vapour density:	not applicable
Partitioning coefficient n-octanol/water (log Pow):	not applicable
Thermal decomposition:	carbon monoxide, carbon dioxide, nitrogen oxide, nitrogen dioxide, Ammonium, To be archived: Hydrocarbons Stable at ambient temperature. If product is heated above decomposition temperature toxic vapours may be released. If product is heated above decomposition temperature hazardous fumes may be released.
Viscosity, dynamic:	3.7 mPa.s (20 °C)
Solubility in water:	soluble
Evaporation rate:	not applicable
Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals:

Corrosive effects to metal are not anticipated.

Oxidizing properties:

Not an oxidizer.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

The product is chemically stable.

No hazardous reactions if stored and handled as prescribed/indicated.

Conditions to avoid

Avoid all sources of ignition: heat, sparks, open flame. Avoid electro-static charge. Avoid prolonged storage. Avoid contamination. Avoid prolonged exposure to extreme heat. Avoid extreme temperatures.

Incompatible materials

oxidizing agents

Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:

Possible thermal decomposition products:

carbon monoxide, carbon dioxide, nitrogen oxide, nitrogen dioxide, Ammonium, To be archived: Hydrocarbons

Safety Data Sheet

Raptor Herbicide

Revision date : 2019/02/14

Page: 7/12

Version: 5.0

(30260311/SDS CPA US/EN)

Stable at ambient temperature. If product is heated above decomposition temperature toxic vapours may be released. If product is heated above decomposition temperature hazardous fumes may be released.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Relatively nontoxic after single ingestion. Slightly toxic after short-term skin contact. Relatively nontoxic after short-term inhalation.

Oral

Type of value: LD50

Species: rat

Value: > 5,000 mg/kg

Inhalation

Type of value: LC50

Species: rat

Value: > 5 mg/l

Exposure time: 4 h

Dermal

Type of value: LD50

Species: rat

Value: > 4,000 mg/kg

Assessment other acute effects

Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

The product has not been tested. The statement has been derived from the properties of the individual components.

Irritation / corrosion

Assessment of irritating effects: May cause slight irritation to the skin. May cause moderate but temporary irritation to the eyes.

Skin

Species: rabbit

Result: non-irritant

Eye

Species: rabbit

Result: non-irritant

Sensitization

Assessment of sensitization: There is no evidence of a skin-sensitizing potential.

Safety Data Sheet

Raptor Herbicide

Revision date : 2019/02/14
Version: 5.0

Page: 8/12
(30260311/SDS CPA US/EN)

modified Buehler test
Species: guinea pig
Result: Skin sensitizing effects were not observed in animal studies.

Aspiration Hazard

The product has not been tested. The statement has been derived from the properties of the individual components. No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: ammonia

Assessment of repeated dose toxicity: After repeated administration the prominent effect is the induction of corrosion.

Genetic toxicity

Assessment of mutagenicity: The product has not been tested. The statement has been derived from the properties of the individual components. Mutagenicity tests revealed no genotoxic potential.

Carcinogenicity

Assessment of carcinogenicity: The product has not been tested. The statement has been derived from the properties of the individual components. The results of various animal studies gave no indication of a carcinogenic effect.

Reproductive toxicity

Assessment of reproduction toxicity: The product has not been tested. The statement has been derived from the properties of the individual components. The results of animal studies gave no indication of a fertility impairing effect.

Teratogenicity

Assessment of teratogenicity: The product has not been tested. The statement has been derived from the properties of the individual components. Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

Other Information

Misuse can be harmful to health.

Symptoms of Exposure

(Further) symptoms and / or effects are not known so far

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:
There is a high probability that the product is not acutely harmful to aquatic organisms.

Aquatic plants

EC10 (7 h) 0.040 mg/l (growth rate), Lemna gibba

Safety Data Sheet

Raptor Herbicide

Revision date : 2019/02/14
Version: 5.0

Page: 9/12
(30260311/SDS CPA US/EN)

EC50 (7 h) 0.143 mg/l (growth rate), Lemna gibba

Toxicity to fish

Information on: imazamox
LC50 (96 h) > 97 mg/l, Cyprinodon variegatus

Aquatic invertebrates

Information on: imazamox

Aquatic plants

Information on: imazamox
EC10 (7 d) 0.0095 mg/l, Lemna gibba
EC50 (72 h) 29.1 mg/l (growth rate), Pseudokirchneriella subcapitata
EC50 (7 d) 0.031 mg/l (growth rate), Lemna gibba

Assessment of terrestrial toxicity

With high probability not acutely harmful to terrestrial organisms.

Other terrestrial non-mammals

Information on: 3-Pyridinecarboxylic acid, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-(methoxymethyl)-
LC50, Anas platyrhynchos
LD50 > 100 ug/bee, Apis mellifera

Persistence and degradability

Assessment biodegradation and elimination (H2O)

The product has not been tested. The statement has been derived from the properties of the individual components.

Elimination information

Not readily biodegradable (by OECD criteria).

Assessment biodegradation and elimination (H2O)

Information on: imazamox

Bioaccumulative potential

Assessment bioaccumulation potential

The product has not been tested. The statement has been derived from the properties of the individual components.

Mobility in soil

Assessment transport between environmental compartments

Safety Data Sheet

Raptor Herbicide

Revision date : 2019/02/14
Version: 5.0

Page: 10/12
(30260311/SDS CPA US/EN)

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: imazamox

*The substance will not evaporate into the atmosphere from the water surface.
Following exposure to soil, the product trickles away and can - dependant on degradation - be transported to deeper soil areas with larger water loads.*

Additional information

Other ecotoxicological advice:
The ecological data given are those of the active ingredient. Do not release untreated into natural waters.

13. Disposal considerations

Waste disposal of substance:

Pesticide wastes are regulated. Improper disposal of excess pesticide, spray mix or rinsate is a violation of federal law. If pesticide wastes cannot be disposed of according to label instructions, contact the State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container disposal:

Rinse thoroughly at least three times (triple rinse) in accordance with EPA recommendations. Consult state or local disposal authorities for approved alternative procedures such as container recycling. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

RCRA:

This product is not regulated by RCRA.

14. Transport Information

Land transport

USDOT

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:

Safety Data Sheet

Raptor Herbicide

Revision date : 2019/02/14

Page: 11/12

Version: 5.0

(30260311/SDS CPA US/EN)

Crop Protection TSCA, US released / exempt

Chemical TSCA, US blocked / not listed

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:

BASF Risk Assessment, CA Prop. 65:

Based on an evaluation of the product's composition and the use(s), this product does not require a California Proposition 65 Warning.

NFPA Hazard codes:

Health: 1 Fire: 0 Reactivity: 0 Special:

Labeling requirements under FIFRA

This chemical is a pesticide product 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 workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.

CAUTION:

HARMFUL IF ABSORBED THROUGH SKIN.

HARMFUL IF INHALED.

KEEP OUT OF REACH OF CHILDREN.

KEEP OUT OF REACH OF DOMESTIC ANIMALS.

Avoid contact with the skin, eyes and clothing.

Wash thoroughly after handling.

16. Other Information

SDS Prepared by:

BASF NA Product Regulations

SDS Prepared on: 2019/02/14

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE, IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU MAKE TESTS TO

Safety Data Sheet

Raptor Herbicide

Revision date : 2019/02/14
Version: 5.0

Page: 12/12
(30260311/SDS CPA US/EN)

DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA, AND INFORMATION FURNISHED BY OUR COMPANY HEREUNDER ARE GIVEN GRATIS AND WE ASSUME NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.
END OF DATA SHEET

Material Safety Data Sheet



Transportation and Medical Emergency Phone: **1-800-535-5053 (INFOTRAC)**
General Phone: 317-580-8282

EPA Reg. Number: 241-437-67690
Creation Date: 03/08/2010

Clearcast® Herbicide

SePRO Corporation 11550 North Meridian Street, Suite 600, Carmel, IN 46032-4565

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: Clearcast® Herbicide

Molecular Formula: C₁₅H₁₈N₃O₄.NH(4)

Chemical Family: imidazole derivative

Synonyms: ammonium salt of imazamox

COMPANY IDENTIFICATION:

SePRO Corporation

11550 North Meridian Street, Suite 600

Carmel, IN 46032-4565

www.sepro.com

Information Phone: 317-580-8282 (Mon - Fri, 8 am to 5 pm EST)

2. HAZARDS IDENTIFICATIONS

EMERGENCY OVERVIEW

CAUTION

- Harmful if absorbed through skin.
- Harmful if inhaled.
- Keep out of reach of children.
- Keep out of reach of domestic animals.
- Avoid contact with the skin, eyes and clothing.
- Avoid inhalation of mists/vapors.

See Product Label for additional precautionary statements.

State of Matter: liquid

Color: pale yellow, clear

Odor: acidic

Potential Health Effects

Primary Routes of Exposure: Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation.

Routes of entry for gases include inhalation and eye contact.

Skin contact may be a route of entry for liquefied gases.

Acute Toxicity: Relatively nontoxic after single ingestion.

Slightly toxic after short-term skin contact. Relatively nontoxic after short-term inhalation.

Irritation/Corrosion: May cause slight irritation to the skin. May cause moderate but temporary irritation to the eyes.

Potential Environmental Effects

Aquatic Toxicity: There is a high probability that the product is not acutely harmful to aquatic organisms.

Terrestrial Toxicity: With high probability not acutely harmful to terrestrial organisms.

EMERGENCY PHONE NUMBER:
1-800-535-5053

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	% by Wt.
Ammonium salt of imazamox (CAS# 247057-22-3)	12.1%

Components not precisely identified are proprietary or not hazardous.

4. FIRST AID MEASURES

General Advice: First aid providers should wear personal protective equipment to prevent exposure. Remove contaminated clothing. Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or physician for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going for treatment.

If Inhaled: Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary.

If on Skin: Rinse skin immediately with plenty of water for 15 - 20 minutes.

If in Eyes: Hold eyes open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

If Swallowed: Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

Note to Physician

Antidote: No known specific antidote.

Treatment: Treat symptomatically.

5. FIRE FIGHTING MEASURES

Flash Point & Method: Based on the high water content the determination of the flash point seems not to be necessary.

Flammable Limits: Not determined. Slightly flammable in the presence of open flames, sparks, static charge and heat.

Auto-Ignition Temperature: Not applicable.

Self-Ignition Temperature: Based on the water content the product does not ignite.

Material Safety Data Sheet



Transportation and Medical Emergency Phone: 1-800-535-5053 (INFOTRAC)
General Phone: 317-580-8282

EPA Reg. Number: 241-437-67690
Creation Date: 03/08/2010

Clearcast® Herbicide

SePRO Corporation 11550 North Meridian Street, Suite 600, Carmel, IN 46032-4565

Extinguishing Media: Use foam, dry extinguishing media, carbon dioxide, water spray.

Firefighting Equipment: Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Hazards During Fire-Fighting: Carbon monoxide, carbon dioxide, nitrogen oxide, nitrogen dioxide, ammonium, hydrocarbons. If product is heated above decomposition temperature, toxic vapors will be released. The substances/groups of substances mentioned can be released if the product is involved in a fire.

Further Information: Evacuate area of all unnecessary personnel. Contain contaminated water/firefighting water. Do not allow to enter drains or waterways.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Take appropriate protective measures. Clear area. Shut off source of leak only under safe conditions. Extinguish sources of ignition nearby and downwind. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

Environmental Precautions: Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water.

Cleanup: Dike spillage. Pick up with suitable absorbent material. Place into suitable containers for reuse or disposal in a licensed facility. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

Report large spills to **INFOTRAC** and consult SePRO Corporation for assistance.

7. HANDLING AND STORAGE

Handling Information

General Advice: *Recommendations Are For Manufacturing, Commercial Blending, And Packaging Workers.*

Pesticide applicators & workers must refer to the Product Label and Directions for Use attached to the product for Agricultural Use Requirements in accordance with the EPA Worker Protection Standard 40 CFR part 170.

- Ensure adequate ventilation. Provide good ventilation of working area (local exhaust ventilation if necessary).
- Keep away from sources of ignition. No smoking.
- Keep container tightly sealed.
- Protect contents from the effects of light. Protect against heat. Protect from air.
- Handle and open container with care. Do not open until ready to use. Once container is opened, content should be used as soon as possible.
- Avoid aerosol formation. Avoid dust formation.
- Provide means for controlling leaks and spills.
- Do not return residues to the storage containers.
- Follow label warnings even after container is emptied. The substance/product may be handled only by appropriately trained personnel.
- Avoid all direct contact with the substance/product. Avoid contact with the skin, eyes and clothing. Avoid inhalation of dusts/mists/vapors.
- Wear suitable personal protective clothing and equipment.

Protection Against Fire and Explosion: The relevant fire protection measures should be noted. Fire extinguishers should be kept handy. Avoid all sources of ignition: heat, sparks, open flame. Sources of ignition should be kept well clear. Avoid extreme heat. Keep away from oxidizable substances. Electrical equipment should conform to national electric code. Ground all transfer equipment properly to prevent electrostatic discharge. Electrostatic discharge may cause ignition.

Storage Information

General Advice: Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect containers from physical damage. Protect against contamination. The authority permits and storage regulations must be observed.

Storage Incompatibility: Segregate from incompatible substances. Segregate from foods and animal feeds. Segregate from textiles and similar materials.

Storage Stability: If substance/product crystallizes, thaw at room temperature.

Temperature Tolerance: Protect from temperatures below 0°C. Changes in the properties of the product may occur if substance/product is stored below indicated temperature for extended periods of time. Protect from temperatures above 40°C. Changes in the

Material Safety Data Sheet



Transportation and Medical Emergency Phone: **1-800-535-5053 (INFOTRAC)**
General Phone: 317-580-8282

EPA Reg. Number: 241-437-67690
Creation Date: 03/08/2010

Clearcast® Herbicide

SePRO Corporation 11550 North Meridian Street, Suite 600, Carmel, IN 46032-4565

properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

Advice on System Design: Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

Personal Protective Equipment

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS

Respiratory Protection: Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) TC23C Chemical/Mechanical type filter system to remove a combination of particles, gas and vapors. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facemask pressure demand self-contained breathing apparatus (SCBA) or a full facemask pressure demand supplied-air respirator (SAR) with escape provisions.

Hand Protection: Chemical resistant protective gloves. Protective glove selection must be based on the user's assessment of the workplace hazards.

Eye Protection: Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body Protection: Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General Safety and Hygiene Measures

- Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment.
- Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice.
- Personal protective equipment should be decontaminated prior to reuse.

- Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks).
- Take off immediately all contaminated clothing. Store work clothing separately.
- Hands and/or face should be washed before breaks and at the end of the shift.
- No eating, drinking, smoking or tobacco use at the place of work. Keep away from food, drink and animal feeding stuffs.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form: liquid

Odor: acidic, mild

Color: pale yellow, clear

pH Value: 6.0 - 6.1

Freezing Point: approximately 0°C (1,013.3 hPa) [Information applies to the solvent.]

Boiling Point: approximately 100°C (1,013.3 hPa) [Information applies to the solvent.]

Vapor Pressure: approximately 23.3 hPa (20°C) [Information applies to the solvent.]

Density: 1.0486 g/cm³ (20°C)

Relative Density: 1.05

Bulk Density: not applicable

Partitioning coefficient n-octanol/ water (log Pow): not applicable

Viscosity, dynamic: 3.7 mPa.s

Molar Mass: 322.4 g/mol

10. STABILITY AND REACTIVITY

Stability: The product is chemically stable. No hazardous reactions if stored and handled as prescribed/indicated.

Incompatibility (specific conditions/materials to avoid): Oxidizing agents.

Hazardous Decomposition Products: No hazardous decomposition products if stored and handled as prescribed/indicated. Prolonged thermal loading can result in products of degradation being given off.

Thermal Decomposition: Possible thermal decomposition products: carbon monoxide, carbon dioxide, nitrogen oxide, nitrogen dioxide, ammonium, hydrocarbons. Stable at ambient temperature. If product is heated above decomposition temperature toxic vapors/hazardous fumes may be released.

Corrosion to Metals: Corrosive effects to metal are not anticipated.

Oxidizing Properties: Not an oxidizer.

Material Safety Data Sheet



Transportation and Medical Emergency Phone: **1-800-535-5053 (INFOTRAC)**
General Phone: 317-580-8282

EPA Reg. Number: 241-437-67690
Creation Date: 03/08/2010

Clearcast® Herbicide

SePRO Corporation 11550 North Meridian Street, Suite 600, Carmel, IN 46032-4565

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Oral (LD₅₀, rat): >5,000 mg/kg

Inhalation (LC₅₀, rat - 4 hr): >5 mg/l

Dermal (LD₅₀, rat): >4,000 mg/kg

Irritation/Corrosion

Skin (rabbit): Non-irritant

Eye (rabbit): Non-irritant

Sensitization (guinea pig): Modified Buehler test. Skin sensitizing effects were not observed in animal studies.

The below information is on the active ingredient, imazamox.

Genetic Toxicity: No mutagenic effect was found in various tests with microorganisms and mammals.

Carcinogenicity: In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.

Reproductive Toxicity: The results of animal studies gave no indication of a fertility impairing effect.

Development: No indications of a developmental toxic/teratogenic effect were seen in animal studies.

12. ENVIRONMENTAL INFORMATION

The below information is on the active ingredient, imazamox.

Fish Acute LC₅₀ (96 hr): *Oncorhynchus mykiss* ≥ 122 ppm

Aquatic Invertebrate Acute EC₅₀: *Daphnia magna* > 122 ppm

Aquatic Plant EC₅₀ (120 hr): Algae > 0.037 mg/l

Other Terrestrial Non-Mammals:

Mallard duck LC₅₀: >5,572 ppm

Honey bee LC₅₀: >100 ug/bee

Degradability/Persistence/Biological/Abiological Degradation: Not readily biodegradable (by OECD criteria).

13. DISPOSAL CONSIDERATIONS

Waste Disposal of Substance: Pesticide wastes are regulated. Improper disposal of excess pesticide, spray mix or rinsate is a violation of federal law. If pesticide wastes cannot be disposed of according to label instructions, contact the State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal: Rinse thoroughly at least three times (triple rinse) in accordance with EPA recommendations. Consult state or local disposal authorities for approved alternative procedures such as container recycling. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

RCRA: This product is not regulated by RCRA.

14. TRANSPORT INFORMATION

DOT: Not regulated.

15. REGULATORY INFORMATION

NOTICE: The information herein is presented 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 from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations.

U.S. Regulations

Registration Status:

Chemical TSCA: US blocked / not listed

Crop Protection TSCA: US released / exempt

OSHA Hazard Category: Not hazardous

EPCRA 311/312 (Hazard Categories): Not hazardous

State Regulations

CA Prop. 65: There are no listed chemicals in this product.

16. OTHER INFORMATION

MSDS STATUS: Creation Date – 03/08/2010
(BASF090409)

The information in this Material Safety Data Sheet relates to this specific material. It may not be valid for this material if used in combination with any other materials or in any process. It is the users' responsibility to satisfy themselves as to the suitability and completeness of this information for their own particular use.

THE INFORMATION HEREIN IS GIVEN IN GOOD FAITH, BUT NO WARRANTY, EXPRESS OR IMPLIED, IS MADE. CONSULT SEPRO CORPORATION FOR FURTHER INFORMATION.