

Safety Data Sheet

Preparation Date 17-Apr-2015 Revision date 31-Dec-2018 Revision Number: 5

1. Identification of the Substance/Preparation and of the Company/Undertaking

Product identifier

Product Description: Cascade

Other means of identification

 Product code
 12-204B

 UN/ID no.
 2902

 Registration number(s)
 70506-176

Recommended use of the chemical and restrictions on use

Recommended use Aquatic herbicide.

Uses advised against Activities contrary to label recommendation

Details of the Supplier of the Safety Data Sheet

Supplier Address

UPL NA Inc.

630 Freedom Business Center

Suite 402

King of Prussia, PA 19406

Emergency telephone number

Company Phone Number 1-800-438-6071

Emergency telephone number Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887

Medical: Rocky Mountain Poison Control Center

(866) 673-6671 (24hrs)

2. Hazards Identification

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Dermal	Category 4
Acute toxicity - Inhalation (Vapors)	Category 2

Label elements

EMERGENCY OVERVIEW

DANGER

Hazard Statements

Harmful in contact with skin Fatal if inhaled



Appearance Yellow brown Physical state Liquid Odor Slight chlorine

Precautionary Statements - Prevention

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Wear protective gloves/protective clothing/eye protection/face protection Do not breathe dust/fume/gas/mist/vapors/spray Use only outdoors or in a well-ventilated area In case of inadequate ventilation wear respiratory protection

IF ON SKIN: Wash with plenty of soap and water
Call a POISON CENTER or doctor if you feel unwell
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards Not Otherwise Classified (HNOC)
OTHER INFORMATION

3. Composition/information on Ingredients

Chemical name	CAS No	Weight-%
Dipotassium endothall salt	2164-07-0	40.3

If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

4. First aid measures

FIRST AID MEASURES

Eye contact Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact

lenses, if present, after 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice. Rinse immediately with plenty of water, also under the eyelids,

for at least 15 minutes.

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. Seek immediate medical attention/advice. Wash off immediately with plenty of water for at least 15 minutes.

Remove and wash contaminated clothing before re-use.

Inhalation Move to fresh air. MAY CAUSE ALLERGIC RESPIRATORY REACTION. Call a poison

control center or doctor for further treatment advice.

Ingestion Call a physician or poison control center immediately. May produce an allergic reaction.

Clean mouth with water. Never give anything by mouth to an unconscious person. Seek immediate medical attention/advice. Do not induce vomiting without medical advice.

Most Important Symptoms and Effects, Both Acute and Delayed

Most Important Symptoms and

Effects

Burning feeling and temporary redness.

Indication of Any Immediate Medical Attention and Special Treatment Needed

Notes to physician No information available. Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Decomposition by contact with water may generate vapours which can be ignited by heat or

open flame.

Specific hazards arising from the chemical

No information available.

Hazardous combustion productsExtreme temperatures convert Endothall product to endothall anhydride which is a strong vessicant causing blistering of eyes, mucous membranes and skin.

Explosion data

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal Precautions Avoid contact with skin, eyes and clothing.

Environmental Precautions

Environmental precautionsDo not flush into surface water or sanitary sewer system. Consult a regulatory specialist to

determine appropriate state or local reporting requirements, for assistance in waste

characterization and/or hazardous waste disposal and other requirements listed in pertinent

environmental permits.

Methods and material for containment and cleaning up

Methods for Clean-Up Remove all ignition sources. Soak up with inert absorbent material. Ground and bond

containers when transferring material. Keep in suitable and closed containers for disposal.

7. Handling and Storage

Precautions for safe handling

Handling Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. Keep out

of reach of children. Empty containers may contain hazardous residues.

Conditions for safe storage, including any incompatibilities

Storage Store in an area where cross-contamination with pesticides, fertilizers, food or feed could

not occur. Keep containers tightly closed in a cool, well-ventilated place.

incompatible materials No information available.

8. Exposure Controls/Personal Protection

Exposure guidelines This product does not contain any hazardous materials with occupational exposure limits

established by the region specific regulatory bodies.

Engineering controls Investigate engineering techniques to reduce exposures. Local mechanical exhaust

ventilation is preferred. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems. PESTICIDE APPLICATORS & WORKERS. THESE WORKERS MUST REFER TO PRODUCT LABELING AND DIRECTIONS FOR USE IN ACCORDANCE WITH

EPA WORKER PROTECTION STANDARD 40 CFR PART 170.

Personal protective equipment

Eye/Face Protection Tightly fitting safety goggles. or. Face-shield.

Skin protection

Respiratory protection

Chemical resistant gloves. Chemical resistant footwear plus socks.

Where airborne exposure is likely, use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Full facepiece equipment is recommended and, if used, replaces need for face shield and/or chemical goggles. If exposures cannot be kept at a minimum with engineering controls, consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure, use an approved full face positive-pressure, self-contained breathing apparatus. Respiratory protection programs must comply with 29 CFR 1910.134.

General hygiene considerations

Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state Liquid

AppearanceYellow brownOdorSlight chlorine

color No information available

<u>Property</u> <u>VALUES</u> <u>Remarks/ • Method</u>

0H 7.4

Melting point/freezing point

8.4 °C / 47 °F

Boiling Point/Range

>100 °C

Flash Point

Not Applicable

Evaporation RateFlammability (solid, gas)
No information available
No information available

Flammability limit in air

Upper Flammability Limit
Lower Flammability Limit
vapor pressure
Vapor Density

No information available
No information available
No information available

Specific gravity 1.285

Water solubility
Solubility in Other Solvents
Partition coefficient: n-octanol/waterNo information available
Autoignition temperature
Decomposition temperature
No information available
no data available
No information available

Viscosity, kinematic

Dynamic viscosity

Explosive properties

Oxidizing properties

No information available
No information available
No information available
No information available

OTHER INFORMATION

Softening pointNo information availablemolecular weightNo information availableVOC ContentNo information availableLiquid DensityNo information available

10. Stability and Reactivity

Reactivity

no data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

No information available.

incompatible materials

No information available.

Hazardous decomposition products

Extreme temperatures may convert endothall product to endothall anhydride, a strong vessicant, causing blistering of eyes, mucous membranes and skin.

11. Toxicological Information

Information on Likely Routes of Exposure

Inhalation Toxic by inhalation.

May cause irreversible damage to eyes. Eve contact

Skin contact May cause irritation. Repeated or prolonged skin contact may cause allergic reactions with

susceptible persons.

Ingestion MAY BE HARMFUL IF SWALLOWED.

Although no allergic skin reactions were observed in guinea pigs following exposure to this **Component Information**

material in water, allergic skin reactions were observed following expsoure to this material in ethanol. Repeated application to the skin of rats produced severe skin irritation, liver, and kidney effects considered to be secondary to irritation, and increased mortality.

Long-term dietary administration produced no adverse effects in rats. Dermal - Slightly toxic

to Rabbits (LD50 2,000 mg/kg) Skin irritation -

Non-irritating to rabbits Inhalation - Slightly toxic to rats (4 hr LC50 0.83 mg/l) aerosol Eye irritation - Cause irreversible eye damage in rabbits. Endothall- Intentional swallowing of 40 ml led to death within 12-hours. Skin allergy was observed in guinea pigs following repeated exposures. Repeated dietary administration (via gelatin capsules) produced vomiting, diarrhea, sluggish movements, and liver, kidney and blood effects in dogs. Long-term dietary administration to rats and mice produced effects in the glandular stomach. High mortality rates and intestinal tumors considered to be secondary to the effects in the stomach were observed in mice. Long-term application to the skin of mice produced no tumors. No birth defects were observed in the offspring of rats exposed orally during pregnancy, even at dosages that produced adverse effects on the mothers. Skeletal anomalies were observed in the offspring of rabbits and mice exposed orally during

pregnancy, but only at dosages that produced adverse effects in the mothers. No genetic changes were observed in tests using bacteria, animal cells or animals.

Information on Toxicological Effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.

Mutagenic effects no data available.

Carcinogenicity There are no known carcinogenic chemicals in this product.

Reproductive effects Not Available. **STOT - Single Exposure** no data available. **STOT - Repeated Exposure** no data available.

Aspiration hazard No information available.

Numerical Measures of Toxicity - Product information

2000 mg/kg LD50 Dermal 0.83 mg/l (4-hr) LC50 Inhalation

12. Ecological Information

ecotoxicity

Endothall dipotassium salt:
Mallard duck LD50 = 328 mg/kg
Bluegill sunfish EC50= 1071 ppm
Rainbow trout EC50 = 363 ppm
Sheepshed minnow 96 hr EC50 = 340 ppm
Mysid shrimp 96 hr EC50 = 257 ppm
Eastern oyster 96 hr EC50 = 335 ppm

Persistence/Degradability

no data available.

Bioaccumulation/ Accumulation

No information available.

Other Adverse Effects

no data available

13. Disposal Considerations

Waste Treatment Methods

Waste Disposal Method Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide or rinsate is

a violation of Federal law. If the wastes cannot be disposed of by use or according to label instructions, contact your State Pesticide or Environmental Control Agency, or the

Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Contaminated packaging Non refillable container. Do not reuse this container. Refer to product label.

14. Transport Information

DOT When shipped as a limited quantity by domestic highway,, as per 49 CFR 173.153 the

combination package, not exceeding a gross weight of 66 pounds (30 kg), may contain inner packagings not over 1.3 gallons (5 L) each. Limited quantity designated packagings

are excepted from labeling and packaging specification requirements.

If the limited quantity package is shipped by air the package must also conform to

applicable requirements of 173.27.

UN/ID no. 2902

Proper shipping name Pesticides, liquid, toxic. n.o.s. (Endothal)

Hazard class 6.1
Packing group PG III
Reportable Quantity (RQ): 1,000 lbs

<u>ICAO</u>

UN/ID no. 2902

Proper shipping name Pesticide, liquid, toxic, n.o.s (Endothall)

Hazard class 6.1 Packing group PG III

IATA

2902 Proper shipping name Pesticide, liquid, toxic, n.o.s (Endothall)

Hazard class PG III Packing group

IMDG

UN/ID no.

2902 UN/ID no.

Proper shipping name Pesticide, liquid, toxic, n.o.s (Endothall)

Hazard class Packing group PG III EmS No. F-A, S-A

15. Regulatory Information

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 for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

signal word **DANGER**

PESTICIDE APPLICATORS & WORKERS THESE WORKERS MUST REFER TO **Ventilation Control**

PRODUCT LABELING AND DIRECTIONS FOR USE IN ACCORDANCE WITH EPA

WORKER PROTECTION STANDARD 40 CFR PART 170.

Corrosive. Causes irreversible eye damage. May be fatal if swallowed. Harmful if inhaled or absorbed through skin. Pesticide is toxic to mammals.

International Inventories

USINV Present **DSL/NDSL** Present EINECS/ Present

ELINCS

ENCS Not Present China Not Present Not Present **KECL PICCS** Not Present Not Present **AICS** Present **TSCA**

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

CERCLA

Not applicable

CERCLA

SARA Product RQ

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RCRA

Pesticide Information

State Regulations

State Right-to-Know

Not applicable

International regulations

U.S. EPA Label information

EPA Pesticide registration number 70506-176

16. Other Information

NFPA HEALTH 3 flammability 0 Instability 0 Physical hazard -

Preparation Date 17-Apr-2015 Revision date 31-Dec-2018

Revision Summary

Update logo Update section 1 Update Section 16

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