



Preparation Date 13-Sep-2016

Revision date 31-Dec-2018

Revision Number: 3

Safety Data Sheet

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

Product identifier

Product Description: Chinook

Other means of identification

Product code 12-CHIN
UN/ID no. UN2902
Registration number(s) 70506-321

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 - Oral	Category 3
Acute toxicity - Inhalation (Vapors)	Category 3
Skin Corrosion/Irritation	Category 2
Serious eye damage/eye irritation	Category 2

Label elements

EMERGENCY OVERVIEW

DANGER

Hazard Statements

CAUSES SKIN IRRITATION
Causes serious eye irritation



Appearance Yellow brown	Physical state Liquid	Odor Chlorine-like
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Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Do not get in eyes, on skin, or on clothing
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection

IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth

Precautionary Statements - Storage

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

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards Not Otherwise Classified (HNOC)**OTHER INFORMATION**

- May be harmful in contact with skin

3. Composition/information on Ingredients

Chemical name	CAS No	Weight-%
Dipotassium endothall salt	2164-07-0	13.3
2,4 Dimethylamine salt	2008-39-1	6.5
Hexylene glycol	107-41-5	25

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.
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.
Inhalation	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
Ingestion	Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Clean mouth with water.

Most Important Symptoms and Effects, Both Acute and Delayed

Most Important Symptoms and no data available.

Effects**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 no data available.

Specific hazards arising from the chemical

Do not mix or allow contact with oxidizing agents as a hazardous chemical reaction may occur.

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 and eyes. Provide adequate ventilation. Use personal protective equipment.

Environmental Precautions

Environmental precautions Do 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 (e.g. sand, silica gel, acid binder, universal binder, sawdust). Sweep up and shovel into suitable containers for disposal.

7. Handling and Storage**Precautions for safe handling**

Handling Wear personal protective equipment. Avoid contact with skin and eyes. Remove all sources of ignition. Do not eat, drink or smoke when using this product. 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.

incompatible materials OXIDIZERS. Potassium permanganate.

8. Exposure Controls/Personal Protection**Exposure guidelines**

Chemical name	ACGIH TLV	OSHA PEL
Hexylene glycol	Ceiling: 25 ppm	(vacated) Ceiling: 25 ppm (vacated) Ceiling: 125 mg/m ³

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.
Personal protective equipment	
Eye/Face Protection	Tightly fitting safety goggles. or. Face-shield.
Skin protection	Long sleeved clothing. Chemical resistant gloves. Long pants. Chemical resistant footwear plus socks.
Respiratory protection	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. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state	Liquid		
Appearance	Yellow brown	Odor	Chlorine-like
color	No information available		

Property	VALUES	Remarks/ • Method
pH	8.05	
Melting point/freezing point	no data available	
Boiling Point/Range	No information available	
Flash Point	No information available	
Evaporation Rate	No information available	
Flammability (solid, gas)	No information available	
Flammability limit in air		
Upper Flammability Limit	No information available	
Lower Flammability Limit	No information available	
vapor pressure	No information available	
Vapor Density	No information available	
Specific gravity	1.099	
Water solubility	No information available	
Solubility in Other Solvents	No information available	
Partition coefficient: n-octanol/water	No information available	
Autoignition temperature	no data available	
Decomposition temperature	No information available	
Viscosity, kinematic	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

OTHER INFORMATION

Softening point	No information available
molecular weight	No information available
VOC Content	No information available
Liquid Density	No information available
Bulk density	9.0 lb/gal

10. Stability and Reactivity

Reactivity

no data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Do not mix or allow contact with oxidizing agents as a hazardous chemical reaction may occur.

Conditions to avoid

Incompatible Products.

Incompatible materials

OXIDIZERS. Potassium permanganate.

Hazardous decomposition products

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

11. Toxicological Information**Information on Likely Routes of Exposure****Product information**

Chinook:

Acute oral LD50 (rat) = 175 mg/kg -1.040 mg/kg

Acute dermal LD50 (rat) = >5,000 mg/kg

Acute inhalation LC50 (rat) = >2.07 mg/L

Inhalation

Harmful by inhalation.

Eye contact

May cause irreversible damage to eyes.

Skin contact

May be harmful if absorbed through the skin.

Ingestion

MAY BE FATAL IF SWALLOWED.

Component Information

Although no allergic skin reactions were observed in guinea pigs following exposure to this material in water, allergic skin reactions were observed following exposure 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. 2,4 D = Oral LD50 (rat) = 3,129 mg/kg, Dermal LD50 (rat) = >5,000 mg/kg Inhalation LC50 (rat) 4 hr = 5.34mg/L, May cause severe eye irritation with corneal injury which may result in permanent impairment of vision, or blindness. Chemical burns may occur. May cause slight skin irritation with local redness. Repeated contact may cause skin burns.

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 The information below indicates whether any agency has listed any ingredient as a carcinogen.
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

LD50 Oral > 175 mg/kg (rat)
LD50 Dermal > 5,000 mg/kg (rat)
LC50 Inhalation > 2.07 mg/l (rat)

12. Ecological Information**ecotoxicity**

This product is toxic to mammals, fish & aquatic invertebrates

Endothall dipotassium salt:

Mallard duck LD50 = 328 mg/kg

Bluegill sunfish EC50= 1071 ppm

Rainbow trout EC50 = 363 ppm

Sheepshead minnow 96 hr EC50 = 340 ppm

Mysid shrimp 96 hr EC50 = 257 ppm

Eastern oyster 96 hr EC50 = 335 ppm

2,4 Dimethylamine salt

Algae (cyanobacterium) 72 hr = 59.9 mg/l

Daphnia Magna (water flea) 48 hr = 4mg/l

Fish (carp) 96 hr = 168.4 mg/l

Rainbow trout 96 hr = 250 mg/l

Bluegill 96 hr = 524 mg/l

Avian

Quail Oral LD50 = 500 mg/kg

Persistence/Degradability

no data available.

Bioaccumulation/ Accumulation

Bioaccumulative potential.

Chemical name	Log Pow
Hexylene glycol 107-41-5	<0.14

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 Refer to product label.

14. Transport Information

DOT

UN/ID no.	UN2902
Proper shipping name	Pesticides, liquid, toxic. n.o.s. (Endothal)
Hazard class	6.1
Packing group	PG III
Reportable Quantity (RQ):	1,000 lbs (endothall)

TDG

ICAO

UN/ID no.	UN2902
Proper shipping name	Pesticide, liquid, toxic, n.o.s (Endothall)
Hazard class	6.1
Packing group	PG III

IATA

UN/ID no.	UN2902
Proper shipping name	Pesticide, liquid, toxic, n.o.s (Endothall)
Hazard class	6.1
Packing group	PG III

IMDG

UN/ID no.	UN2092
Proper shipping name	Pesticide, liquid, toxic, n.o.s (Endothall)
Hazard class	6.1
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

Corrosive. Keep out of Reach of Children. Causes irreversible eye damage. May be fatal if swallowed. Harmful if inhaled or absorbed through skin. This product is toxic to mammals, fish & aquatic invertebrates.

International Inventories

USINV	Not present
DSL/NDL	Not present
EINECS/	Not Present
ELINCS	
ENCS	Not Present
China	Not Present
KECL	Not Present

PICCS Not Present
 AICS Not Present
 TSCA Not Present

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDL - 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
 IECS - 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

Y

CERCLA

Not applicable

CERCLA

RCRA

Pesticide Information

Component	FIFRA - Restricted Use	FIFRA - Pesticide Product Other Ingredients	FIFRA - Listing of Pesticide Chemicals	California Pesticides - Restricted Materials
Hexylene glycol 107-41-5 (25)			X	

State Regulations

State Right-to-Know

Not applicable

International regulations

U.S. EPA Label information

EPA Pesticide registration number 70506-321

16. Other Information

NFPA HEALTH 3 flammability 0 Instability 0 Physical hazard -

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Revision Summary

Update logo Update section 1 Update Section 16***

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