

Revision Date 17-Jun-2016

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

GHS product identifier

Product Name Tundra® Supreme

Other means of identification

EPA Reg. No.: 1381-243
Product ID/Unity Item No.: 10134422, 1457612
UN-Number UN2903
Synonyms Insecticide

Recommended use of the chemical and restrictions on use

Recommended Use Agricultural Insecticide- See product label for complete list of uses and sites.
Uses advised against See product label for information regarding restriction on the use of this product.

Supplier's details

Supplier Address
 Winfield Solutions, LLC.
 P.O. Box 64589
 St. Paul, MN 55164-0589

For Non-Emergency Business Inquiries:
 1-855-494-6343 Mon-Fri, 8am-5pm CST

Emergency telephone number

Emergency Telephone Number FOR MEDICAL EMERGENCY: 1-877-424-7452 (24hrs)
 FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT, CALL: CHEMTREC 1-800-424-9300 (24 hours)

2. HAZARDS IDENTIFICATION

Classification

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

Acute Oral Toxicity	Category 3
Acute Inhalation Toxicity - Dusts and Mists	Category 4
Serious Eye Damage/Eye Irritation	Category 2B
Germ Cell Mutagenicity	Category 1B
Carcinogenicity	Category 1B
Specific Target Organ Toxicity (Repeated Exposure)	Category 1
Aspiration Toxicity	Category 1
Flammable liquids	Category 3

GHS Label elements, including precautionary statements**Emergency Overview**

Signal Word	Danger	
Hazard Statements		
<ul style="list-style-type: none"> • Toxic if swallowed • Harmful if inhaled • Causes eye irritation • May cause genetic defects • May cause cancer • Causes damage to organs through prolonged or repeated exposure • May be fatal if swallowed and enters airways • Flammable liquid and vapor. 		
		
Appearance	Light red, Transparent.	Physical State Liquid.
		Odor Pungent.

Precautionary Statements**Prevention**

- Use only outdoors or in a well-ventilated area.
- Wash face, hands and any exposed skin thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Use personal protective equipment as required.
- Do not breathe mist, vapors or spray.
- Keep away from heat/sparks/open flames/hot surfaces - No smoking.
- Keep container tightly closed.
- Ground/bond container and receiving equipment.
- Use explosion-proof electrical/ventilating/lighting/equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.

General Advice

- If exposed or concerned: Get medical attention/advice

Eyes

- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- If eye irritation persists: Get medical advice/attention.

Skin

- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

Inhalation

- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Ingestion

- IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- Rinse mouth.
- Do NOT induce vomiting.

Fire

- In case of fire: Use CO₂, dry chemical, or foam for extinction.

Storage

- Store locked up.
- Store in a well-ventilated place. Keep cool.

Disposal

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

Hazard Not Otherwise Classified (HNOC)

Not applicable.

Other information

Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

0% of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms

Insecticide

Chemical Name	CAS-No	Weight %	Trade secret
Naphtha (petroleum), heavy aromatic	64742-94-5	<46.1	*
Chlorpyrifos	2921-88-2	28.6	*
Bifenthrin	82657-04-3	9	*
Naphthalene	91-20-3	<4.46	*
Pseudocumene	95-63-6	0.77	*

**The exact percentage (concentration) of composition has been withheld as a trade secret.*

4. FIRST AID MEASURES

Description of necessary first-aid measures**General Advice**

If swallowed, get medical help or contact a Poison Control Center right away.

Eye Contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin Contact

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

Inhalation

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention.

Ingestion

Aspiration hazard if swallowed - can enter lungs and cause damage. If swallowed, get medical help or contact a Poison Control Center right away. Do NOT induce vomiting. Rinse mouth immediately and drink plenty of water. If vomiting occurs, lean victim forward to reduce the risk of aspiration. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed

Most Important Symptoms/Effects Aspiration may cause pulmonary edema and pneumonitis.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician

This product contains a pyrethroid. If large amounts have been ingested, the stomach and intestine should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided. Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. If exposed, plasma and red blood cell cholinesterase tests may indicate significance of exposure (baseline data are useful). Atropine, only by injection, is the preferable antidote. Oximes, such as 2-PAM/protopam, may be therapeutic if used early; however, use only in conjunction with atropine. In case of severe acute poisoning, use antidote immediately after establishing an open airway and respiration. Aspiration hazard.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Dry chemical, carbon dioxide (CO₂), alcohol-resistant foam or water spray.

Unsuitable Extinguishing Media Do not use straight streams.

Specific Hazards Arising from the Chemical

Closed containers may explode from vapor expansion in high heat. Thermal decomposition can lead to release of irritating gases and vapors.

Explosion Data

Sensitivity to Mechanical Impact

None.

Sensitivity to Static Discharge

Yes.

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. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) Vapors may travel to source of ignition and flash back.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures**Personal Precautions**

Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Remove all sources of ignition. Do not get in eyes, on skin, or on clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Wear protective gloves/clothing and eye/face protection. Refer to Section 8.

Environmental Precautions**Environmental Precautions**

Do not allow spilled product to enter sewers or waterways. Collect spillage. Dispose of contents/container to an approved waste disposal plant. See Section 12 for additional Ecological Information.

Methods and materials for containment and cleaning up**Methods for Containment**

Prevent further leakage or spillage if safe to do so. Dike far ahead of spill; use dry sand to contain the flow of material

Methods for Cleaning Up

Prevent product from entering drains. Take precautionary measures against static discharges. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray. Remove all sources of ignition. Ground and bond all lines and equipment associated with product system. All equipment should be non-sparking and explosion proof. Remove and wash contaminated clothing separately before re-use.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Store away from children, food or feed products. Protect from freezing. Do not store in aluminum or metal containers.

Incompatible Products Incompatible with strong acids and bases.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Chlorpyrifos 2921-88-2	TWA: 0.1 mg/m ³ inhalable fraction and vapor S*	(vacated) TWA: 0.2 mg/m ³ (vacated) S*	TWA: 0.2 mg/m ³ STEL: 0.6 mg/m ³
Naphthalene 91-20-3	STEL: 15 ppm TWA: 10 ppm S*	TWA: 10 ppm TWA: 50 mg/m ³ (vacated) TWA: 10 ppm (vacated) TWA: 50 mg/m ³ (vacated) STEL: 15 ppm (vacated) STEL: 75 mg/m ³	IDLH: 250 ppm TWA: 10 ppm TWA: 50 mg/m ³ STEL: 15 ppm STEL: 75 mg/m ³
Pseudocumene 95-63-6	TWA: 25 ppm	(vacated) TWA: 25 ppm (vacated) TWA: 125 mg/m ³	TWA: 25 ppm TWA: 125 mg/m ³

Legend

S* - Skin Absorber

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection Safety glasses with side shields or safety goggles.
Skin and Body Protection Impervious clothing. Impervious gloves.
Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

NOTE TO END USERS: Personal protection equipment (PPE) and clothing listed in this section is for manufacturing, commercial blending and packaging workers. Applicators and handlers should refer to the pesticide product label for proper personal protective equipment and clothing.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Do not eat, drink or smoke when using this product. Provide regular cleaning of equipment, work area and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid.	Appearance	Light red, Transparent.
Odor	Pungent.	Odor Threshold	No information available.

<u>Property</u>	<u>Values</u>	<u>Remarks/ - Method</u>
pH	4.6	None known
Melting Point/Range	No data available	None known
Boiling Point/Boiling Range	No data available	None known
Flash Point	136 °F	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
upper flammability limit	No data available	
lower flammability limit	No data available	
Vapor Pressure	No data available	None known
Vapor Density	No data available	None known
Specific Gravity	1.035	None known
Water Solubility	No data available	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition Temperature	No data available	None known
Decomposition Temperature	No data available	None known
Viscosity	No data available	None known

Flammable Properties Flammable.

Explosive Properties No data available

Oxidizing Properties No data available

Other information

VOC Content (%) No data available

10. STABILITY AND REACTIVITY

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to avoid

Do not freeze. Ignitions sources - heat, sparks and open flames.

Incompatible materials

Incompatible with strong acids and bases.

Hazardous decomposition products

Thermal decomposition can lead to release of irritating and toxic gases and vapors: Carbon monoxide (CO), Carbon dioxide (CO₂), Nitrogen oxides (NO_x), and Sulfur oxides.

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure****Product Information**

Inhalation	Harmful if inhaled.
Eye Contact	Causes eye irritation.
Skin Contact	Repeated exposure may cause skin dryness or cracking.
Ingestion	Toxic if swallowed. Potential for aspiration if swallowed. Vomiting may aspirate into lungs and cause chemical pneumonia.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Symptoms of overexposure may include dizziness, drowsiness, headaches, nausea, heart rate changes, or difficulty in breathing. See other listed effects under ingestion.

Delayed and immediate effects and also chronic effects from short and long term exposure

Sensitization Did not cause sensitization on laboratory animals.
Mutagenic Effects Contains a known or suspected mutagen.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Naphthalene	A3	Group 2B	Reasonably Anticipated	-

ACGIH: (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC: (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

NTP: (National Toxicity Program)

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

Reproductive Toxicity No information available.
STOT - single exposure None of the ingredients are known to cause specific target organ effects from a single exposure.
STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure.
Target Organ Effects Eyes. Skin. Respiratory system. Central nervous system (CNS). Peripheral Nervous System (PNS). Plasma Cholinesterase. Liver. Kidney. Blood.
Aspiration Hazard May be fatal if swallowed and enters airways.

Numerical measures of toxicity - Product

Acute Toxicity 0% of the mixture consists of ingredient(s) of unknown toxicity.
LD50 Oral 98 mg/kg; (rat)
LD50 Dermal 5050 mg/kg; (rabbit)
Inhalation
dust/mist 2.18 mg/L; (rat, 4 hr)

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Naphtha (petroleum), heavy aromatic 64742-94-5	EC50 72 h: = 2.5 mg/L (Skeletonema costatum)	LC50 96 h: = 19 mg/L static (Pimephales promelas) LC50 96 h: = 2.34 mg/L (Oncorhynchus mykiss) LC50 96 h: = 1740 mg/L static (Lepomis macrochirus) LC50 96 h: = 45 mg/L flow-through (Pimephales promelas) LC50 96 h: = 41 mg/L (Pimephales promelas)		EC50 48 h: = 0.95 mg/L (Daphnia magna)
Chlorpyrifos 2921-88-2		LC50 96 h: 0.002-0.032 mg/L flow-through (Oncorhynchus mykiss) LC50 96 h: 0.0047-0.0075 mg/L flow-through (Lepomis macrochirus) LC50 96 h: 0.11-0.13 mg/L flow-through (Pimephales promelas) LC50 96 h: < 0.001 mg/L static (Oncorhynchus mykiss) LC50 96 h: = 0.0013 mg/L static (Lepomis macrochirus) LC50 96 h: = 0.0026 mg/L (Lepomis macrochirus) LC50 96 h: = 0.00717 mg/L (Poecilia reticulata) LC50 96 h: = 0.00717 mg/L semi-static (Poecilia reticulata) LC50 96 h: = 0.008 mg/L static (Cyprinus carpio) LC50 96 h: = 0.011 mg/L (Oncorhynchus mykiss)	EC50 = 46.3 mg/L 5 min	EC50 48 h: 0.00009 - 0.00012 mg/L Flow through (Daphnia magna) EC50 48 h: 0.00012 - 0.00023 mg/L Static (Daphnia magna)
Bifenthrin 82657-04-3		LC50 96 h: 0.0001-0.00019 mg/L flow-through (Oncorhynchus mykiss) LC50 96 h: 0.0003-0.00038 mg/L flow-through (Lepomis macrochirus)		EC50 48 h: 0.00135 - 0.00195 mg/L Static (Daphnia magna)
Naphthalene 91-20-3	EC50 72 h: = 0.4 mg/L (Skeletonema costatum)	LC50 96 h: 0.91 - 2.82 mg/L static (Oncorhynchus mykiss)		
Pseudocumene 95-63-6		LC50 96 h: 7.19 - 8.28 mg/L flow-through (Pimephales promelas) LC50 96 h: = 7.72 mg/L flow-through (Pimephales promelas)		EC50 48 h: = 6.14 mg/L (Daphnia magna)

Persistence and Degradability No information available.

Bioaccumulation

Chemical Name	Log Pow
Naphtha (petroleum), heavy aromatic	2.9 - 6.1
Naphthalene	3.3
Pseudocumene	3.63

Other Adverse Effects

Dangerous to bees. To protect bees and pollinating insects do not apply to plants when in flower.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging

Do not re-use empty containers.

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Naphthalene - 91-20-3	U165	Included in waste streams: F024, F025, F034, F039, K001, K035, K060, K087, K145		U165
Component	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Naphthalene 91-20-3 (<4.46)			Toxic waste waste number F025 Waste description: Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.	

14. TRANSPORT INFORMATION

Note:

This product qualifies as a severe marine pollutant when shipped in bulk or by water.

DOT

UN-Number	UN2903
Proper shipping name	Pesticides, liquid, toxic, flammable, n.o.s.
Hazard Class	6.1
Subsidiary Class	3
Packing Group	III
Description	UN2903, Pesticide, liquid, toxic, flammable, n.o.s (chlorpyrifos, bifenthrin, aromatic solvent), 6.1 (3), PG III, RQ
Emergency Response Guide Number	131

15. REGULATORY INFORMATION

International Inventories

TSCA Exempt

Legend

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

U.S. Federal Regulations

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:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Bifenthrin	82657-04-3	9	1.0
Naphthalene	91-20-3	<4.46	0.1

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Chlorpyrifos	1 lb			X
Naphthalene	100 lb	X	X	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Chlorpyrifos	1 lb		RQ 1 lb final RQ RQ 0.454 kg final RQ
Naphthalene	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ

U.S. State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:

Chemical Name	CAS-No	California Prop. 65
Naphthalene	91-20-3	Carcinogen
1,4-Dioxane	123-91-1	Carcinogen
Acetaldehyde	75-07-0	Carcinogen
Ethylene oxide	75-21-8	Carcinogen Developmental Female Reproductive Male Reproductive
Propylene oxide	75-56-9	Carcinogen

U.S. State Right-to-Know Regulations

"X" designates that the ingredients are listed on the state right to know list.

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Chlorpyrifos	X	X	X		X
Bifenthrin	X				
Naphthalene	X	X	X	X	
Pseudocumene	X	X	X	X	X
n-Butyl alcohol	X	X	X		X

U.S. EPA Label Information

EPA Pesticide Registration Number 1381-243

Difference between SDS and EPA Pesticide label

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:

WARNING. May be fatal if swallowed. Causes substantial but temporary eye injury. Avoid contact with eyes or clothing. Combustible. Do not use or store near heat or open flame.

16. OTHER INFORMATION					
------------------------------	--	--	--	--	--

<u>NFPA</u>	Health Hazard	3	Flammability	2	Instability	0	Physical and Chemical Hazards -
<u>HMIS</u>	Health Hazard	3*	Flammability	2	Physical Hazard	0	Personal Protection X

*Indicates a chronic health hazard.

Prepared By	Product Stewardship 23 British American Blvd. Latham, NY 12110 1-800-572-6501
Revision Date	17-Jun-2016
Supersedes Document Dated	17-May-2013
Revision Note	All sections revised.

General Disclaimer

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

End of Safety Data Sheet