

SAFETY DATA SHEET

TCS Growstar Imi-Lambda Granular T&O Insecticide

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1. Product and Company Identification

903863 **Product Code:**

TCS Growstar Imi-Lambda Granular T&O Insecticide **Product Name:**

Company Name: Turf Care Supply Corp. **Phone Number:** 1 (330)558-0910

50 Pearl Road

Suite 200

Brunswick, OH 44212

Web site address: www.turfcaresupply.com **Email address:** regaffairs@tcscusa.com

PERS Emergency Contact: 1 (800)633-8253 Information: Turf Care Supply Corp. 1 (330)558-0910

Fertilizer with Insecticide. Synonyms:

2. Hazards Identification

Skin Corrosion/Irritation, Category 2

Serious Eye Damage/Eye Irritation, Category 1

Toxic To Reproduction, Category 1B

Specific Target Organ Toxicity (single exposure), Category 1 Specific Target Organ Toxicity (repeated exposure), Category 1

Aquatic Toxicity (Acute), Category 1 **Aquatic Toxicity (Chronic), Category 3**







GHS Signal Word: Danger

GHS Hazard Phrases: Causes skin irritation.

Causes serious eye damage.

May damage fertility or the unborn child .

Causes damage to organs

Causes damage to organs through prolonged or repeated exposure.

Very toxic to aquatic life.

Harmful to aquatic life with long lasting effects.

GHS Precaution Phrases: Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Do not breathe dust.

Wash hands thoroughly after handling.

Do not eat, drink or smoke when using this product. Wear appropriate personal protective equipment. Use personal protective equipment as required.

IF ON SKIN: Wash with plenty of soap and water. **GHS Response Phrases:**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

IF exposed: Call a POISON CENTER or doctor/physician. IF exposed or concerned: Get medical attention/advice.

Get medical attention/advice if you feel unwell. If skin irritation occurs, get medical advice/attention. Take off contaminated clothing and wash before re-use.

Collect spillage.



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GHS Storage and Disposal

Store in a secure location.

Phrases:

Dispose of contents/container to an appropriate disposal facility.

Potential Health Effects

(Acute and Chronic):

Chronic: Prolonged or repeated skin contact may cause dermatitis. Prolonged or repeated exposure may cause permanent eye damage. Chronic exposure may cause

lung damage. Effects may be delayed.

Inhalation: May be harmful if inhaled. Low hazard for normal industrial handling. The toxicological

properties of this substance have not been fully investigated. May cause systemic effects. Material may be irritating to mucous membranes and upper respiratory tract.

Skin Contact: May cause skin irritation. Dust causes mechanical irritation. Low hazard for usual

industrial handling.

Eye Contact: May cause eye irritation. Dust may cause mechanical irritation.

Ingestion: May be harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting

and diarrhea. Low hazard for normal industrial handling. The toxicological properties of

this substance have not been fully investigated. May cause systemic effects.

3. Composition/Information on Ingredients

CAS#	Hazardous Components (Chemical Name)	Concentration
1317-65-3	Limestone	83.1 %
7447-40-7	Potassium chloride	11.6 %
14808-60-7	Quartz	2.77 %
872-50-4	N-Methyl-2-pyrrolidone	0.782 - 0.829 %
138261-41-3	Imidacloprid	0.200 - 0.208 %
91465-08-6	Lambda-cyhalothrin	0.040 - 0.042 %

4. First Aid Measures

Emergency and First Aid

Procedures:

In Case of Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial

respiration. If breathing is difficult, give oxygen. Get medical aid.

In Case of Skin Contact: Get medical aid if irritation develops or persists. In case of contact, flush skin with plenty

of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops

and persists. Wash clothing before reuse. Wash off with soap and plenty of water.

In Case of Eye Contact: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and

lower eyelids. Do NOT allow victim to rub eyes or keep eyes closed.

In Case of Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Call a poison control

center. If swallowed, do not induce vomiting unless directed to do so by medical

personnel. Never give anything by mouth to an unconscious person.

Signs and Symptoms Of

Exposure:

To the best of our knowledge, the chemical, physical, and toxicological properties have

not been thoroughly investigated.

Note to Physician: Treat symptomatically and supportively.



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5. Fire Fighting Measures

Flash Pt: No data.

Explosive Limits: LEL: No data. UEL: No data.

Autoignition Pt: No data.

Suitable Extinguishing Media: For small fires, use dry chemical, carbon dioxide, or water spray. For large fires, use dry

chemical, carbon dioxide, alcohol-resistant foam, or water spray.

Fire Fighting Instructions: As in any fire, wear a self-contained breathing apparatus in pressure-demand,

MSHA/NIOSH (approved or equivalent), and full protective gear. Substance is noncombustible. Decomposes at high temperatures, resulting in toxic and corrosive

products. Runoff from fire control or dilution water may cause pollution.

Flammable Properties and

Hazards:

Products:

Most of the components of this product are non-combustible. However, a portion of them

may support combustion at elevated temperatures.

Hazardous Combustion Thermal decomposition may result in the production of ammonia, formaldehyde, biuret,

chlorine, cyanic acid, and cyanide, and oxides of carbon, nitrogen, phosphorus,

potassium, sulfur, and chlorine, and oxides of alkaline earth metals, and certain heavier metals used as nutrients in fertilizer products, such as copper, iron, manganese, and

zinc, and other toxic and irritating fumes and gases.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Provide ventilation. Avoid runoff into storm sewers and ditches which lead to waterways. Do not let this product enter the environment except as directed on product label. Clean up spills immediately, observing precautions in the Protective Equipment section.

in the Protective Equipment Section

Personal precautions.

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure

adequate ventilation.

Environmental precautions.

Do not let product enter drains.

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers

for disposal.

PROCEDURES & PERSONAL PRECAUTIONS.

Exercise appropriate precautions to minimize direct contact with skin or eyes and

prevent inhalation of dust.

Methods for cleaning up.

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area

and wash spill site after material pickup is complete.

7. Handling and Storage

Precautions To Be Taken in Handling:

Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Wash thoroughly after handling. Use only in a well-ventilated area. Keep container tightly closed. Wash

clothing before reuse.

Provide appropriate exhaust ventilation at places where dust is formed.



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Store in a cool, dry place. Keep container closed when not in use. Precautions To Be Taken in Storing:

8. Exposure Controls/Personal Protection					
CAS#	Partial Chemical	Name	OSHA TWA	ACGIH TWA	Other Limits
1317-65-3	Limestone		PEL: 15 (dust); 5 (resp.) mg/m3	No data.	No data.
7447-40-7	Potassium chloric	le	No data.	No data.	No data.
14808-60-7	Quartz		PEL: 50 ug/m3	TLV: 0.05 mg/m3 (R)	No data.
872-50-4	N-Methyl-2-pyrrol	idone	No data.	No data.	No data.
138261-41-3	Imidacloprid		TWA: 5 mg/m3 (Respirable dust)	TWA: 10 mg/m3 (Particulate)	No data.
91465-08-6	Lambda-cyhaloth	rin	TWA: 5 mg/m3	CEIL: 5 mg/m3 (salts)	No data.
· ·		eceding chart, the exposure limits for quartz are for respirable which includes quartz, cristobalite, and/or tridymite forms.			
(Specify Type): requirements or Eu conditions warrant desired, use type N			uropean Standard EN 149 respirator use. Where pro N95 (US) or type P1 (EN 1	OSHA's 29 CFR 1910.134 must be followed wheneve tection from nuisance level 43) dust masks. For higher (EU EN 143) respirator car	er workplace s of dusts are level protection
1 -				hemical safety goggles as on the control of the con	•

Protective Gloves:

Other Protective Clothing:

Engineering Controls

(Ventilation etc.):

Work/Hygienic/Maintenance Practices:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low. Use adequate general or local exhaust ventilation to keep airborne concentrations below the

Wear appropriate protective gloves to prevent skin exposure. Wash and dry hands.

Wear appropriate protective clothing to prevent skin exposure. Choose body protection according to the amount and concentration of the dangerous substance at the work

permissible exposure limits.

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Wash thoroughly after handling.

9. Physical and Chemical Properties

Physical States: [] Gas [] Liquid [X] Solid

place.

Multi-colored, granular solid. Appearance and Odor:

Characteristic pesticide solvent odor.

pH: No data. Melting Point: ~ 133 C **Boiling Point:** No data. Flash Pt: No data. No data. Evaporation Rate:

Flammability (solid, gas): No data available.

Explosive Limits: LEL: No data. UEL: No data.

Vapor Pressure (vs. Air or

mm Hg):

No data.

Vapor Density (vs. Air = 1): No data.



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Specific Gravity (Water = 1): No data.

Bulk density: ~ 45 - 65 LB/CF

Solubility in Water: ~ 1,080 g/L at 20.0 C

Solubility Notes: The solubility value cited is for the urea component of this product, if present. See

section 3.

Octanol/Water Partition

No data.

Coefficient:

Information

Autoignition Pt: No data.

Decomposition Temperature: ~ 135 C

Viscosity: No data.

Additional Physical

The melting point and decomposition temperatures cited are for the urea component of

this product, if present. See section 3.

Urea decomposes before boiling. (UNEP Publication, OECD SIDS UREA, CAS No:

57-13-6)

10. Stability and Reactivity

Stability: Unstable [] Stable [X]

Conditions To Avoid -

Incompatible materials, dust generation, heating to decomposition. High temperatures.

Instability:

Incompatibility - Materials To Strong oxidizing agents, bases, acids, aluminum.

Avoid:

Hazardous Decomposition or The decomposition of fertilizer products may result in the generation of some or all of the

Byproducts:

following: ammonia, formaldehyde, biuret, chlorine, cyanic acid, and cyanide, and oxides of carbon, nitrogen, phosphorus, potassium, sulfur, and chlorine, and oxides of alkaline earth metals, and certain heavier metals used as nutrients in fertilizer products, such as copper, iron, manganese, and zinc, and other irritating and toxic fumes and gases.

Possibility of Hazardous

Reactions:

Will occur [] Will not occur [X]

Conditions To Avoid -

No data available.

Hazardous Reactions:

11. Toxicological Information

Toxicological Information: Epidemiology: No information found.

Teratogenicity: Teratogenic effects have occurred in experimental animals.

Neurotoxic effects have occurred in experimental animals.

Reproductive toxicity - no data available.

Inhalation: May cause damage to organs through prolonged or repeated exposure.

CAS# 7447-40-7: Potassium chloride:

Acute toxicity, LD50, Oral, Rat, 2600. MG/KG; "Sbornik Vysledku Toxixologickeho Vysetreni Latek A Pripravku,", Institut Pro Vychovu Vedoucicn P, Marhold, J.V., Institut Pro Vychovu Vedoucicn, Pracovniku Chemickeho, Prumyclu Praha Czechoslovakia,

Vol/p/yr: -,8, 1972

Standard Draize Test, Eyes, Species: Rabbit, 500.0 MG, 24 H; "Sbornik Vysledku Toxixologickeho Vysetreni Latek A Pripravku,", Institut Pro Vychovu Vedoucicn P, Marhold, J.V., Institut Pro Vychovu Vedoucicn, Pracovniku Chemickeho, Prumyclu Praha

Czechoslovakia, Vol/p/yr: -,8, 1972

Carcinogenicity/Other

Information:

This material may contain small amounts of respirable crystalline and amorphous silica. The International Agency for Cancer Research (IARC) has classified crystalline silica as



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a carcinogen to humans (Group 1), and amorphous silica as not classifiable as to its carcinogenicity to humans (Group 3). See "Silica, Some Silicates, Coal dust and para-Aramid Fibrils in IARC Monographs on the Evaluation of Carcinogenic Risks to Humans", (Vol. 68).

I	CAS#	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
I	1317-65-3	Limestone	n.a.	n.a.	n.a.	n.a.
I	7447-40-7	Potassium chloride	n.a.	n.a.	n.a.	n.a.
I	14808-60-7	Quartz	Known	1	A2	n.a.
I	872-50-4	N-Methyl-2-pyrrolidone	n.a.	n.a.	n.a.	n.a.
I	138261-41-3	Imidacloprid	n.a.	n.a.	n.a.	n.a.
l	91465-08-6	Lambda-cyhalothrin	n.a.	n.a.	n.a.	n.a.

12. Ecological Information

General Ecological Information:

Environmental: If released to the atmosphere, urea will degrade rapidly in the vapor-phase by reaction with photochemically produced hydroxyl radicals (half-life of 9.6 hr). If released to soil, urea is hydrolyzed to ammonium through soil urease activity (the basis of its use as a fertilizer). The rate of hydrolysis can be fast (24 hr); however, a number of variables (such as increasing the pellet size of the fertilizer) can decrease the degradation rate.

Urea will dissolve and disperse in water, and will promote algae growth which may degrade water quality and taste. Notify downstream water users of any release that may affect water quality.

Do not empty into drains.

Imidacloprid: Oral LD50 values for bees range from 3.7 to 40.9 ng per bee, and contact toxicity values ranged from 59.7 to 242.6 ng per bee. Based on these values, imidacloprid is considered to be highly toxic to bees. (Schmuck, R.; Schoning, R.; Stork, A.; Schramel, O. Risk posed to honeybees (Apis mellifera L, Hymenoptera) by an imidacloprid seed dressing of sunflowers. Pest Manag. Sci. 2001, 57, 225-238, and Suchail, S.; Guez, D.; Belzunces, L. P. Discrepancy between Acute and Chronic Toxicity Induced by Imidacloprid and its Metabolites in Apis mellifera. Environ. Toxicol. Chem. 2001, 20 (11), 2482-2486.)

CAS# 7447-40-7: Potassium chloride:

LC50, Rainbow Trout (Oncorhynchus mykiss), 1610000. UG/L, 48 H, Mortality, Water temperature: 17.0 C C, pH: 7.70, Hardness: 40.00 MG/L; Toxicity of Candidate Molluscicides to Zebra Mussels (Dreissena polymorpha) and Selected Nontarget Organisms, Waller, D.L., J.J. Rach, W.G. Cope, L.L. Marking, S.W. Fisher, and H.

Dabrowska, 1993

Persistence and Degradability:

Terrestrial Field Test Half-life (days)

Imidacloprid: 40 - 174

Lambda Cyhalothrin: 10 - 84

(Thurston County Health Department, 412 Lilly Road NE, Olympia, WA 98506, Pesticide

Reviews, Imidacloprid (4/10/2009), Lambda Cyhalothrin (12/20/2010))

Bioaccumulative Potential:

Octanol/Water Partition Coefficients

Imidacloprid: 0.57 Lambda Cyhalothrin: 6.9



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(Thurston County Health Department, 412 Lilly Road NE, Olympia, WA 98506, Pesticide

Reviews, Imidacloprid (4/10/2009), Lambda Cyhalothrin (12/20/2010))

Mobility in Soil: Water Solubility

Imidacloprid: 580 mg/L

Lambda Cyhalothrin: 0.005 mg/L

(Thurston County Health Department, 412 Lilly Road NE, Olympia, WA 98506, Pesticide

Reviews, Imidacloprid (4/10/2009), Lambda Cyhalothrin (12/20/2010))

13. Disposal Considerations

Waste Disposal Method:

If material cannot be completely used according to label directions, dispose of container

and contents according to this section.

Contact a licensed professional waste disposal service to dispose of this material.

Do not let product enter drains.

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed. RCRA U-Series: None listed.

Observe all federal, state, and local environmental regulations.

Packaging: Empty bag may be placed in trash.

14. Transport Information

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Not Regulated.

DOT Hazard Class: UN/NA Number:

15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS#	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
1317-65-3	Limestone	No	No	No
7447-40-7	Potassium chloride	No	No	No
14808-60-7	Quartz	No	No	No
872-50-4	N-Methyl-2-pyrrolidone	No	No	Yes
138261-41-3	Imidacloprid	No	No	No
91465-08-6	Lambda-cyhalothrin	No	No	Yes-Cat. N106

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

[] Yes [X] No	Explosive	[] Yes [X] No	Acute toxicity (any route of exposure)
[] Yes [X] No	Flammable (gases, aerosols, liquid, or solid)	[X] Yes [] No	Skin Corrosion or Irritation
[] Yes [X] No	Oxidizer (liquid, solid or gas)	[X] Yes [] No	Serious eye damage or eye irritation
[] Yes [X] No	Self-reactive	[] Yes [X] No	Respiratory or Skin Sensitization
[] Yes [X] No	Pyrophoric (liquid or solid)	[] Yes [X] No	Germ cell mutagenicity



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[] Yes [X] No	Pyrophoric gas	[] Yes [X] No	9 ,
[] Yes [X] No	Self-heating	[X] Yes [] No	Reproductive toxicity
[] Yes [X] No	Organic peroxide	[X] Yes [] No	Specific target organ toxicity (single or repeated exposure)
[] Yes [X] No	Corrosive to metal	[] Yes [X] No	Aspiration Hazard
[] Yes [X] No	Gas under pressure (compressed gas)	[] Yes [X] No	Simple Asphyxiant
[] Yes [X] No	In contact with water emits flammable gas	[X] Yes [] No	(Health) Hazard Not Otherwise Classified (HNOC)
[] Yes [X] No	Combustible Dust		
[] Yes [X] No	(Physical) Hazard Not Otherwise Classified (HNOC)		
CAS#	Hazardous Components (Chemical Name)	Other US E	PA or State Lists
1317-65-3	Limestone	CAA HAP,0	DDC: No; CWA NPDES: No; TSCA: Yes -
		Inventory;	CA PROP.65: No; MA Oil/HazMat: No; MI CMR,
		Part 5: No;	NJ EHS: No; NY Part 597: No; PA HSL: Yes - 1
7447-40-7	Potassium chloride	CAA HAP,0	DDC: No; CWA NPDES: No; TSCA: Yes -
		Inventory;	CA PROP.65: No; MA Oil/HazMat: No; MI CMR,
		Part 5: No;	NJ EHS: No; NY Part 597: No; PA HSL: No
14808-60-7	Quartz	CAA HAP,0	DDC: No; CWA NPDES: No; TSCA: Yes -
		Inventory;	CA PROP.65: No; MA Oil/HazMat: No; MI CMR,
		Part 5: No;	NJ EHS: No; NY Part 597: No; PA HSL: Yes - 1
872-50-4	N-Methyl-2-pyrrolidone	CAA HAP,C	DDC: No; CWA NPDES: No; TSCA: Yes -
	, ,,	Inventory:	CA PROP.65: Yes: RDTox.; MA Oil/HazMat: No;
		•	art 5: No; NJ EHS: Yes - 3716; NY Part 597: No;
		PA HSL: Ye	
138261-41-3	Imidacloprid		DDC: No; CWA NPDES: No; TSCA: No; CA
100201 41 0	imidadopha	•	No: MA Oil/HazMat: No: MI CMR, Part 5: No: NJ
			NY Part 597: No; PA HSL: No
01.465.00.0	Lambda aybalathrin		· · · · · · · · · · · · · · · · · · ·
91465-08-6	Lambda-cyhalothrin	•	DDC: Yes - Cat.; CWA NPDES: No; TSCA: No; CA
			No; MA Oil/HazMat: No; MI CMR, Part 5: Yes -
		Cat.; NJ El	HS: Yes - Cat.; NY Part 597: No; PA HSL: No

Regulatory Information:

This chemical is a pesticide product registered by the United States 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 (SDS), and for workplace labels on non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

KEEP OUT OF REACH OF CHILDREN CAUTION - CAUCION

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION - CAUCION

Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco.

ENVIRONMENTAL HAZARDS

This product is highly toxic to aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

This chemical demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.



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16. Other Information

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Hazard Rating System:

Flammability Instability
Health
NFPA: Special Hazard

Additional Information About No data available.

This Product:

Company Policy or

Disclaimer:

Disclaimer and Limitation of Liability: This data sheet was developed from information on the constituent materials identified herein and does not relate to the use of such materials in combination with any other material or process. No warranty is expressed or implied with respect to the completeness or ongoing accuracy of the information contained in this data sheet, and Turf Care Supply Corp. disclaims all liability for reliance on such information. This data sheet is not a guarantee of safety. Users are responsible for ensuring that they have all current information necessary to safely use the product described by this data sheet for their specific purposes.