

Safety Data Sheet

Agrisel USA, Inc.

Preparation Date 08-May-2015

Revision date 08-May-2015

Revision Number: 1

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

Product identifier

Product Description: Zone-Plus Termiticide/Insecticide with Permethrin for Turf and Ornamental Use

Other means of identification

Item#: 12U-131
UN-No UN1993
Synonyms Not Available
Registration number(s) 72159-9

Recommended use of the chemical and restrictions on use

Recommended use Insecticide. termiticide.
Uses advised against Activities contrary to label recommendation

Details of the Supplier of the Safety Data Sheet

Supplier Address

Agrisel USA, Inc
P.O. Box 3528
Suwanee, GA 30024

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)

Skin sensitization	Category 1
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1B
Aspiration toxicity	Category 1

Label elements

EMERGENCY OVERVIEW

DANGER

hazard statements

May cause an allergic skin reaction
May cause genetic defects
May cause cancer
May be fatal if swallowed and enters airways



appearance amber

Physical state liquid

Odor faint Mild (bad translation) Petroleum

Precautionary Statements - Prevention

Do not handle until all safety precautions have been read and understood
 Do not handle until all safety precautions have been read and understood
 Wear cold insulating gloves/face shield/eye protection
 Do not get in eyes, on skin, or on clothing
 Contaminated work clothing should not be allowed out of the workplace
 Wear protective gloves

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention
 IF ON SKIN: Wash with plenty of soap and water
 If skin irritation or rash occurs: Get medical advice/attention
 Wash contaminated clothing before reuse
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
 Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards Not Otherwise Classified (HNOC)

OTHER INFORMATION

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

3. Composition/information on Ingredients

Chemical name	CAS-No	Weight %	Trade secret
Permethrin technical	52645-53-1	36.8	
Hydrocarbon solvent	Proprietary	>15	

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

Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. Call 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 physician or poison

control center immediately.

Ingestion Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

Protection of First-aiders Use personal protective equipment.

Most Important Symptoms and Effects, Both Acute and Delayed

Most Important Symptoms and Effects No information available.

Indication of Any Immediate Medical Attention and Special Treatment Needed

Notes to physician Treat symptomatically. Treatment should include monitoring for the development of hypersensitivity reactions with respiratory distress. For paresthesia, Vitamin E topical application is highly effective.

5. Fire-fighting measures

Suitable extinguishing media

Carbon dioxide (CO₂). Water. Foam.

Unsuitable extinguishing media No information available.

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapours.

Hazardous combustion products Carbon dioxide (CO₂). Chlorine. Hydrogen chloride.

Explosion data

Protective equipment and precautions for firefighters

Use personal protective equipment. 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 Provide adequate ventilation. Avoid contact with the skin and the eyes. Remove all sources of ignition. Wear protective gloves/clothing and eye/face protection. Wash thoroughly after handling.

Environmental Precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. 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 Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Ground and bond containers when transferring material. Sweep up and shovel into suitable containers for disposal.

7. Handling and Storage

Precautions for safe handling

Handling Do not eat, drink or smoke when using this product. Remove all sources of ignition. Avoid contact with skin and eyes. Keep away from open flames, hot surfaces and sources of

ignition. Check that all equipment is properly bonded and grounded. Use spark resistant tools. Remove and wash contaminated clothing before re-use.

Conditions for safe storage, including any incompatibilities

Storage Keep container tightly closed in a dry and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep out of the reach of children. Store in an area where cross-contamination with pesticides, fertilizers, food or feed could not occur. Static electricity may accumulate when transferring material. All containers must be bonded and grounded during filling and emptying operations.

incompatible materials Strong oxidizing agents.

8. Exposure Controls/Personal Protection

Exposure guidelines

Chemical name	ACGIH TLV	OSHA PEL
Hydrocarbon solvent	TWA: 100 ppm	TWA: 500 ppm TWA: 2900 mg/m ³ (vacated) TWA: 100 ppm (vacated) TWA: 525 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

Use eye protection to avoid eye contact. Where there is potential for eye contact have eye flushing equipment available. Goggles. If splashes are likely to occur, wear: Face-shield.

Skin protection

Wear protective gloves/clothing. 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. Remove and wash contaminated clothing before re-use. 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	Odor	faint Mild (bad translation)
appearance	amber		Petroleum
color	No information available		
Property	VALUES	Remarks/ • Method	
pH	4.9		
Melting point/freezing point	5.9 °C / 43 °F		
Boiling Point/Range	No information available		
Flash Point	44 C 111 °F		
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	1.039 @ 20 C
Water solubility	No information available
Solubility in Other Solvents	No information available
Partition coefficient: n-octanol/water	No information available
Autoignition temperature	No information 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	1.039 @ 20 C
VOC Content	No information available
density	No information available
Bulk density	No information available

10. Stability and Reactivity

Reactivity

no data available

Chemical stability

Stable under normal conditions.

Possibility of hazardous reactions

None under normal processing.

Hazardous polymerization

Hazardous polymerisation does not occur.

Conditions to avoid

Heat, flames and sparks.

incompatible materials

Strong oxidizing agents.

Hazardous decomposition products

Carbon oxides.

11. Toxicological Information

Information on Likely Routes of Exposure

Inhalation	HARMFUL IF INHALED.
Eye contact	Moderately irritating to the eyes.
Skin contact	May be harmful if absorbed through the skin.
Ingestion	HARMFUL IF SWALLOWED.

Component Information

Permethrin - has low mammalian toxicity and virtually no allergic side effects and is not a skin or eye irritant. However, prolonged exposure might result in parathesia (tingling sensation), which is reversible within 12 hours. Exposure to permethrin is via dermal contact and inhalation. In repeat patch tests in humans, dermal applications of permethrin at 1% for up to 9 days did not result in irritation or sensitization. The clinical manifestations of inhalation exposure are confined to the upper respiratory tract and include rhinitis, sneezing, cough, and scratchy throat.

Hydrocarbon solvent (Stoddard) - Exposure via inhalation or dermal contact. Humans exposed for 30 minutes to up to 2,400 mg/m³ of completely vaporized Stoddard solvent had no dose related changes in motor coordination and the exposure level of 2,400 mg/m³ was considered as the no observed effect level. In a 15 minute period, eye irritation,

characterized as a slight dryness, was reported in one of six volunteers at 150 ppm. At 470 ppm (2,700 mg.m³), ocular irritation was reported by all six volunteers. Exposure greater than 525 mg/m³ have been associated with ocular and dermal irritation, defatting of the skin, and anusea. Acute effects from inhaling large concentrations of Stoddard solvent has been associated with headaches, fatigue, intermittent episodes of inebriation, and memory deficits that generally resolve on discontinuation of exposure. Ingestion of petroleum hydrocarbons are poorly absorbed from the gastrointestinal tract, and do not cause appreciable systemic toxicity by this route unless aspiration has occurred.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hydrocarbon solvent	500	-	-

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

Chemical name	ACGIH	IARC	NTP	OSHA
Permethrin technical 52645-53-1	-	Group 3		-

Reproductive effects Not Available.
STOT - Single Exposure No information available.
STOT - repeated exposure No information available.
Target organ effects kidney, Respiratory System, EYES, skin, Central Nervous System (CNS).
Aspiration hazard No information available.

Numerical Measures of Toxicity - No information available

The following values are calculated based on chapter 3.1 of the GHS document . 777 mg/kg (rat) 0 mg/kg (rat) 0 mg/l (mist) (dust) mg/m³ 0 ml/m³ (Vapor)

12. Ecological Information

Marine Pollutant. (Permethrin).

ecotoxicity

Permethrin in soil is stable over a wide range of pH values when applied at agricultural use rates. Permethrin has moderate rate of degradation in soil, At termicidal use rates, permethrin degrades at a slower rate which is governed by soil characteristics such as soil type, microbial population concentration in soil and aerobic conditions of the soil. Due to its high affinity for organic matter, there is little potential for movement in soil or entry into ground water. Permethrin has a low Pow of 6.1 but a low potential to bioconcentrate (BCF=500) due to the ease with which it is metabolized.

Extremely toxic to fish = 0.05 ug/L to 315 ug/L

Extremely toxic to aquatic arthropods LC50 = 0.02 ug/L to 7.6 ug/L

Marine species are often more sensitive than freshwater species. Bacteria, algae, mollusks and amphibians are much more tolerant of permethrin than the fish and arthropods. Care should be taken to avoid contamination of the aquatic environment. Permethrin is slightly toxic to birds and oral L50 values are greater than 3,600 mg/kg. Longer dietary studies showed that concentrations of up to 500 ppm in the diet had no effect on bird reproduction. Permethrin is extremely toxic to fish, aquatic invertebrates and honey bees.

rainbow trout 96 hr LC50 = 2.5 ug/L

Bluegill sunfish 95 hr LC50 = 1.8 ug/L

Japanese quail LD50 = 23,000 mg/kg

Mallard duck LD50 = 11,257 mg/kg

Persistence/Degradability

No information available.

Bioaccumulation/ Accumulation

Bioaccumulative potential.

Chemical name	Log Pow
Permethrin technical 52645-53-1	6.5

Other Adverse Effects

No information 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-No	UN1993
Proper shipping name	Flammable liquid, n.o.s (Hydrocarbon)
Hazard class	3
Packing group	PG III
Marine Pollutant	Marine Pollutant. (Permethrin).

TDG**ICAO**

UN-No	UN1993
Proper shipping name	Flammable liquid, n.o.s (hydrocarbon solvent)
Hazard class	3
Packing group	PG III
Description	Marine Pollutant (Permethrin)

IATA

UN-No	UN1993
Proper shipping name	Flammable liquid, n.o.s (hydrocarbon)
Hazard class	3
Packing group	PG III
Description	Marine Pollutant (Permethrin)

IMDG/IMO

UN-No	UN1993
Proper shipping name	Flammable liquid, n.o.s (hydrocarbon)
Hazard class	3
Packing group	PG III
EmS No.	F-E, S-E
Marine Pollutant	Marine Pollutant

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 CAUTION

Ventilation Control 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.

Harmful if inhaled or absorbed through skin. Harmful if swallowed. Keep out of Reach of Children. Causes moderate eye irritation. Extremely toxic to aquatic organisms including fish and invertebrates.

International Inventories

USINV	Not determined
DSL/NDSL	Not determined
EINECS/ ELINCS	Does not comply
ENCS	Does not comply
China	Does not comply
KECL	Does not comply
PICCS	Does not comply
AICS	Does not comply
TSCA	Does not comply

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 40n of the Code of Federal Regulations, Part 372:

Chemical name	SARA 313 - Threshold Values
Permethrin technical - 52645-53-1	1.0

SARA 311/312 Hazardous

Categorization

Acute health hazard	yes
Chronic health hazard	NO
Fire hazard	yes
Sudden release of pressure hazard	No
Reactive Hazard	yes

CERCLA

SARA Product RQ 0

RCRA

Pesticide Information

Component	FIFRA - Restricted Use	FIFRA - Pesticide Product Other Ingredients	FIFRA - Listing of Pesticide Chemicals	California Pesticides - Restricted Materials

Permethrin technical 52645-53-1 (36.8)			X	
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State Regulations**State Right-to-Know**

Chemical name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Permethrin technical	X	X		X	
Hydrocarbon solvent	X	X	X		

International regulations**U.S. EPA Label information**

EPA Pesticide registration number 70506-6

16. Other Information

NFPA**HEALTH 3****flammability 2****Instability 1****Physical hazard -****Preparation Date**

08-May-2015

Revision date

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Revision Summary

Update to GHS format