



1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Reality™** Termiticide/Insecticide EPA Registration No: 33658-33

Gharda Chemicals Limited
660 Newtown-Yardley Rd.
Newtown, PA 18940

Emergency Response Telephone Numbers
For Spills Call CHEMTREC: 1-(800)-424-9300
For Medical Call: 1-(866)-359-5660

2. COMPOSITION / INFORMATION ON INGREDIENTS

	<u>CAS No.</u>	<u>(% w/w)</u>	<u>OSHA PEL</u>
Permethrin*	52645-53-1	38.3	None
Hydrocarbon Solvent	8052-41-3	51.7	100 ppm
Proprietary Surfactant	Blend	10.0	None

**cis/trans* ratio: Max. 42% (±) *cis* and min. 58% (±) *trans*
Contains 3.2 pounds permethrin per gallon as an emulsifiable concentrate.

Chemical Class: Pyrethroid

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW:

- EPA Signal Word: Caution
- May be harmful if swallowed.
- Avoid contact with eyes, skin, or clothing.
- Wash thoroughly with soap and water after handling.
- Thermal decomposition and burning may form toxic by-products.
- For extensive exposure to fire, wear protective equipment.
- Highly toxic to fish and aquatic organisms.

POTENTIAL HEALTH EFFECTS:

Effects from overexposure result from ingestion or coming into contact with the skin or eyes. Symptoms of overexposure include increased hypersensitivity to touch and sound, tremors and convulsions. Contact with permethrin may produce skin sensations such as numbing, burning or tingling. These skin sensations are reversible and usually subside within 12 hours.

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4. FIRST AID MEASURES

IF ON SKIN OR CLOTHING: 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.

IF IN EYES: Hold eye open and rinse gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center for treatment advice.

IF SWALLOWED: Call a Poison Control Center or doctor immediately for treatment advice. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person. Do not induce vomiting unless told to do so by a poison control center or doctor.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth to mouth if possible. Call a poison control center or doctor for further treatment advice

NOTE TO PHYSICIAN: This product contains aromatic hydrocarbons, which can produce a severe pneumonitis if aspirated. Consideration should be given to gastric lavage with an endotracheal tube in place. Treatment is controlled removal of exposure followed by symptomatic and supportive care.

5. FIRE FIGHTING MEASURES

Flash Point:	86°C (214°F)
Auto ignition Temperature:	No data
Flammable Limits (STP):	Not applicable
Extinguishing Media	Foam CO ₂ or dry chemical. Soft stream water fog only if necessary. Contain all runoff.
Special Instructions	Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe smoke, gases or vapor generated.
Degree of Fire/ Explosion Hazard:	Moderately combustible. When heated above the flash point, this material releases vapors which, when mixed with air, can burn or be explosive.
Hazardous Decomposition Products:	Chlorine, hydrogen chloride, carbon dioxide, carbon monoxide, and aldehydes.
Hazardous Polymerization:	Will not occur

6. ACCIDENTAL RELEASE MEASURES

FOR EMERGENCY: Call CHEMTREC 1-800-424-9300. Isolate and post spill area. Wear protective clothing and personal protective equipment as prescribed in Section 8 "Personal Protection". Keep unprotected persons and animals out of the area. Keep material out of streams and sewers. Dike to confine spill and absorb with an absorbent such as clay, sand or soil. Vacuum, shovel or pump waste into a drum and label content.

To clean and neutralize spill area, tools and equipment, wash with a suitable solution of caustic or soda ash and an appropriate alcohol (methanol, ethanol or isopropanol). Follow this by washing with a strong soap and water solution. Absorb as above, any excess liquid and add to the drums of waste already collected. Repeat if necessary. Dispose of drummed waste according to the method outlined in "Disposal Considerations".

7. HANDLING AND STORAGE

Store in a cool, dry, well-ventilated place. Do not use or store near heat, open flame or hot surfaces. Store in original containers only. Store at temperatures above 40°F (5°C). If crystals form, warm to room temperature 70°F (21°C) by room heating only for 24-48 hours, and shake occasionally until crystals dissolve and product appears uniform. Do not use external source of heat for warming container. Keep out of reach of children and animals. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

8. PERSONAL PROTECTION

Personal protective recommendations for mixing or applying this product are prescribed on the product label. Information stated below provides useful, additional guidance for individuals whose use of handling of this product is not guided by the product label.

Ventilation: Use local exhaust at all process locations where vapor or mist may be present. Ventilate all transport vehicles prior to unloading.

Work Clothing: Depending upon concentrations encountered, wear coveralls or long-sleeved uniform and head covering. For larger exposures as in the case of spills, wear full body cover barrier suit, such as a rubber rain suit. Leather items - such as shoes, belts and watchbands - that become contaminated should be removed and destroyed. Launder all work clothing before reuse (separately from household laundry).

Eye Protection: For splash, spray or mist exposure, wear chemical protective goggles or a face shield.

Respiratory Protection: For splash, spray or mist exposure, wear as a minimum, a properly fitted half-face or full-face air-purifying respirator which is approved for

pesticides (U.S.NIOSH/MSHA, EU CEN) or comparable certification organization). Respirator use and selection must be based on airborne concentrations.

Gloves: Wear chemical protective gloves made of materials such as nitrile, neoprene or Viton brand. Thoroughly wash the outside of gloves with soap and water prior to removal. Inspect regularly for leaks.

Personal Hygiene: Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking or using tobacco. Shower at the end of the workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	Amber
Physical Form:	Liquid
Odor:	Faint mild petroleum
Solubility in Water:	Emulsifies
Specific Gravity:	1.03 g/ml at 27°C (81°F)
Bulk Density:	8.58 lbs/gal
Flash point:	86°C (214°F)
pH:	6.05 (5% solution in water)

10. STABILITY AND REACTIVITY

Stability:	Thermally stable, not explosive.
Incompatibility:	Excessive heat and fire.
Hazardous Polymerization:	Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Effects from Overexposure

General: Reality Termiticide/Insecticide has low oral, dermal and inhalation toxicity. It is minimally irritating to the eyes and slightly irritating to the skin.

Ingestion: Vomiting after ingestion of this product may cause aspiration of hydrocarbon solvents into the lungs that may result in fatal pulmonary edema.

Skin contact: Experience to date indicates that contact with permethrin has rarely produced skin sensations such as numbing, burning or tingling. These skin sensations are reversible and usually subside within 12 hours. Large toxic doses of Reality Termiticide/Insecticide administered to laboratory animals have produced central nervous system effects with symptoms that include hypersensitivity to touch and sound, tremors, and chronic convulsions.

Inhalation: Overexposure to animals via inhalation has also produced symptoms such as squinting eyes, irregular and rattling breathing and ataxis. Inhalation of hydrocarbon solvent vapors may cause dizziness, disturbances in vision drowsiness, respiratory irritation, and eye, skin and mucous membrane irritation.

Chronic Effects from Overexposure

No data available for Reality Termiticide/Insecticide. In studies with laboratory animals, permethrin did not cause reproductive toxicity or teratogenicity. Analysis of chronic feeding studies in both mice and rats with permethrin resulted in the conclusion that permethrin's potential for induction of oncogenicity in experimental animals is low and that the likelihood of oncogenic effects in humans is nonexistent or extremely low. Long term feeding studies in animals resulted in increased liver and kidney weights, induction of the liver microsomal drug metabolizing enzyme system, and histopathological changes in the lungs and liver. An overall absence of genotoxicity has been demonstrated mutagenicity testing with permethrin. Chronic exposure to hydrocarbon solvents may cause headaches, dizziness, loss of sensations or feelings, and liver and kidney damage.

Carcinogenicity:

IARC: No

NTP: No

Other (OSHA): No

12. ECOLOGICAL INFORMATION

Physical/Environmental Properties

In soil, permethrin is stable over a wide range of pH values. When applied at agricultural use rates, permethrin has a moderate rate of degradation in soil. At termiticidal use rates, permethrin degrades at a slower rate, which is governed by soil characteristics. Due to its high affinity for organic matter ($K_{oc}=86,000$), there is little potential for movement in soil or entry into ground water. Permethrin has a Log P_{ow} of 6.1, but a low potential to bioconcentrate (BCF = 500) due to the ease with which it is metabolized.

Environmental Toxicology

Permethrin is highly toxic to fish ($LC_{50} = 0.5\mu\text{g/L}$ to $315\ \mu\text{g/L}$) and aquatic arthropods ($LC_{50} = 0.02\ \mu\text{g/L}$ to $7.6\ \mu\text{g/L}$). Marine species are often more sensitive than the 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 LD_{50} values are greater than $3600\ \text{mg/kg}$. Longer dietary studies showed that concentrations of up to 500 ppm in the diet had no effect on bird reproduction.

13. DISPOSAL CONSIDERATIONS

Pesticide spray mixture or rinsate that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticides. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by the use 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.

14. TRANSPORT INFORMATION

U.S. DOT (Department of Transportation)

Reportable Quantity (RQ): None

U.S. Surface Freight Class: Insecticides, NOI, other than Poison, NMFC item 102120.

For highway and railroad shipment in the USA: Insecticides, NOI, other than Poison.

For air and water shipment, and also road and rail other than in the U.S.A.:

Flammable Liquids, n.o.s. (contains hydrocarbon solvent), 3, III,
UN1993, NAERG Guide 128

MARPOL Designation: #1 Severe Marine Pollutant (permethrin 38.3%)

TSCA (Toxic Substances Control Act): Not regulated by TSCA

15. REGULATORY INFORMATION

SARA Title III (Superfund Amendments and Reauthorization Act)

Section 302 Extremely Hazardous Substances (40CFR 355): Not listed

Section 302.4 Reportable Quantity (RQ) (40CFR 355): None

Section 311 Hazard Categories (40 CFR 370): Immediate, Delayed, Fire

Section 312 Threshold Planning Quantity (40 CFR 370): The threshold planning quantity for this product, if treated as a mixture, is 10,000 lb. This product contains the following ingredients with a TPQ of less than 10,000 lb.: None

Section 313 (40 CFR 372): This product contains the following ingredients subject to Section 313 reporting requirements: permethrin (38.3%)

CERCLA Reportable Quantity (RQ) (40 CFR Table 302.4): Not listed

16. OTHER INFORMATION

Issue Date: October 29, 2010

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, expressed or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state, and local laws and regulations.