

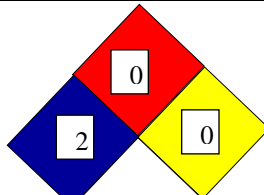




Safety Data Sheet

Revision date: 22.01.2016

Date of issue: 22.01.2016

Sr. No.	Title of the section	Information required in this section								
1.	Identification of the mixture & of the company									
1.1	Identification of the substance or preparation	1.1.1 Trade Name: Shar-Guard ABN: Shar-Shield PPZ 1.1.2 Product Registration No.: 83529-22								
1.2	Use of the substance/ preparation	1.2.1 Recommended uses: ✓ Herbicide 1.2.2 Restricted uses: Not known as on date								
1.3	Company/ under - taking identification	1.4.1 Company name: Sharda USA LLC 1.4.2 Contact Person : Sharon Gunning, Director, Supply Chain and Administrative Operations 1.4.3 Telephone number: +91 22 5678 2800 1.4.4 Fax number : +91 22 5678 2828, +91 22 5678 2808 1.4.5 E-mail : shardain@vsnl.com ; WEBSITE: http://www.shardausa.com								
1.4	Emergency telephone	1.5.1 Emergency telephone number : 1(800) 222-1222 CHEMTREC PHONE: 1(800) 424-9300 National Poison Information Center : (800)-222-1222 1.5.2 Telephone number of USA importer: (610) 350-6930 1.5.3 Opening hours: 24 hrs								
2.	Hazard Identification									
2.1	Classification of the substance according to Regulation 1910.1200 [GHS]	<p>Classification: Acute Tox. 4 – Oral, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1</p> <p>Hazard statement :</p> <ul style="list-style-type: none">• H302 – Harmful if swallowed• H317 – May cause an allergic skin reaction• H400 – Very toxic to aquatic life• H410 – Very toxic to aquatic life with long lasting effects <p>Signal Word : Warning</p> <p>Hazard pictograms :</p> <div></div> <p>GHS07 GHS09</p> <p>Precautionary statements :</p> <p>P264 – Wash face, hands and any exposed skin thoroughly after handling P270 - Do not eat, drink or smoke when using this product. P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if feeling unwell. P330 - Rinse mouth P501 - Dispose of contents/ container to an approved waste disposal plant P273 - Avoid release to the environment. P391 - Collect spillage P261 – Avoid breathing dust/fume/ gas/mist/vapours/spray P272 - Contaminated work clothing should not be allowed out of the workplace. P280 – Wear protective gloves/ protective clothing/eye protection/face protection P302 + P352 - IF ON SKIN: Wash with plenty of soap and water P333 + P313 – If skin irritation or rash occurs: Get medical advice/attention. P321 – Specific treatment (see applicable details on the label) P363 – Wash contaminated clothing before reuse.</p>								
2.2	Other Information	<p>Hazard Ratings : NFPA Health: 2 Flammability: 0 Reactivity: 0</p> <div><table><tr><td>2</td><td>HEALTH</td></tr><tr><td>0</td><td>FLAMMABILITY</td></tr><tr><td>0</td><td>REACTIVITY</td></tr><tr><td>0</td><td>PROTECTIVE EQUIPMENT</td></tr></table></div> <p>Hazard Ratings : HMIS</p>	2	HEALTH	0	FLAMMABILITY	0	REACTIVITY	0	PROTECTIVE EQUIPMENT
2	HEALTH									
0	FLAMMABILITY									
0	REACTIVITY									
0	PROTECTIVE EQUIPMENT									


		Health: 2 Flammability: 0 Reactivity: 0						
3.	Composition /Information on Ingredients							
3.1	Composition	<p>List of raw materials in the mixture with hazardous/ non-hazardous additional</p> <table> <tr> <th>% Conc.</th><th>CAS no.</th><th>Substance name</th></tr> <tr> <td>41.8</td><td>60207-90-1</td><td>Propiconazole</td></tr> </table>	% Conc.	CAS no.	Substance name	41.8	60207-90-1	Propiconazole
% Conc.	CAS no.	Substance name						
41.8	60207-90-1	Propiconazole						
3.2	Common name and synonyms	Details not known						
3.3	Classified Impurities and stabilizing additives contributing to classification of the chemical	No major known impurity have Carcinogen, Mutagen & Reprotoxic (CMR) classification which can contribute to the Classification & Labelling of the chemical.						
4.	First Aid Measures							
4.1	Description of first aid measures	<ul style="list-style-type: none"> - Inhalation: Remove source of contamination or move victim to fresh air. Keep victim warm and at rest. Treat symptomatically and supportively. Obtain medical advice if necessary. - Skin contact: Remove contaminated clothing, shoes and leather goods. Wash skin gently and thoroughly with water and non-abrasive soap. Persons who become sensitised may require specialised medical management with anti-inflammatory agents. - Eye contact: Immediately flush the eyes with gently flowing lukewarm water or saline solution for 20 minutes, occasionally lifting the upper and lower lids. Specialised ophthalmologic treatment might be required. - Oral: Do not induce emesis. Seek medical advice 						
4.2	Important symptoms & effects	Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident is recommended.						
4.3	Immediate medical attention	<p>Notes for the doctor: No relevant information or antidote available</p> <p>For 24-hour medical emergency assistance (human or animal) call 1-800-222-1222. For chemical emergency assistance (spill, leak, fire, or accident) call ChemTrec at 1-800-424-9300.</p>						
5.	Fire Fighting Measures							
5.1	suitable extinguishing media	Carbon dioxide, extinguishing powder or water spray can be used for cooling of unaffected stock. In case of larger fires, water spray or alcohol resistant foam to be used.						
5.2	Special hazard arising from the chemical	Toxic carbon and nitrogen oxides						
5.3	Special protective equipment and precautions for firefighters	As in any fire, wear full protective clothing and self-contained breathing apparatus with full face piece operated in pressure-demand or other positive pressure mode.						
6.	Accidental Release Measures							
6.1	Personal precautions, protective equipment and emergency procedures	<p>6.1.1 For non-emergency personnel</p> <ul style="list-style-type: none"> ➤ Personal precautions: Avoid contact with skin and eyes. Do not breathe in fumes. Ventilate area of spill or leak, especially confined areas. Shut off/remove any ignition sources. For personal protection see Section 8. ➤ Environmental precautions: Do not allow to enter drains or water courses. When the product contaminates public waters, inform appropriate authorities immediately in accordance with local regulations. <p>6.1.2 For emergency responders: Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Do not touch the spilled material. Avoid the spread of the spillage by using adsorbents, if this can be done without risks. Ground all equipment containing</p>						

		material.			
6.2	Methods and material for containment and cleaning up	Sweep up with dustpan and brush off inert material. The waste should be held in suitable labeled container.			
6.3	Reference to other section	If appropriate section 7, 8 and 13 shall be referred to			
7.	Handling and Storage				
7.1	Precautions for safe handling	7.1.1. Recommendations shall be specified to: Remove sources of naked flame or sparks. Avoid contact with eyes, prolonged contact with skin, and inhalation of fumes and spray particles. Use with adequate ventilation. Do not apply directly to areas where surface water is present. Water used to clean equipment must be disposed of correctly to avoid contamination. 7.1.2. Advice on general occupational hygiene: (a) not to eat, drink and smoke in work areas (b) to wash hands after use; and (c) To remove contaminated clothing and protective equipment before entering eating areas			
7.2		Conditions for safe storage, including any incompatibilities (a) How to manage risks associated with storage : No special storage condition indicated (b) Other advice including: Do not contaminate water, food, or feed by storage or disposal. Store in cool place. Keep container tightly closed in a dry and well-ventilated place.			
8.	Exposure Controls / Personal Protection				
8.1	Control parameters	Components with limit values that require monitoring at the workplace <table><tr><td>60207-90-1</td><td>OSHA permissible exposure limit (PEL): Not available American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV): Not available Syngenta Exposure Standards : 8 mg/m³ for 8 h TWA</td></tr></table>		60207-90-1	OSHA permissible exposure limit (PEL): Not available American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV): Not available Syngenta Exposure Standards : 8 mg/m ³ for 8 h TWA
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8.2	Exposure controls				
8.2.1	Appropriate engineering controls	The description of appropriate exposure control measures shall relate to the identified use(s) of the substance or mixture as referred to in subsection 1.2. This information shall be sufficient to enable the employer to carry out an assessment of risk to the safety and health of workers arising from the presence of the substance.			
8.2.2	Individual protection measures	<p>(a) Eye / face protection: Wear appropriate protective eyeglasses, splash goggles or chemical safety goggles and face shield.</p> <p></p> <p>(b) Skin protection: Wear appropriate protective clothing like impervious lab coat, apron or coveralls.</p> <p>(i) Hand protection: Use compatible chemical / solvent resistant protective gloves made of suitable materials like rubber, plastic, etc,</p> <p></p> <p>(ii) Other: Wear appropriate boots and other footwear.</p> <p>(c) Respiratory protection: In case of brief exposure or low pollution, use respiratory filter device. In case of intensive or longer exposure, use self-contained respiratory protective device. Short term filter device: Filter AX. In case of emergency spills, use a NIOSH approved respirator with any N, R, P, or HE filter.</p> <p>(d) General protective and hygienic measures:</p> <ul style="list-style-type: none">• Keep away from foodstuffs, beverages and feed.• Immediately remove all soiled and contaminated clothing.			

		<ul style="list-style-type: none"> • Wash hands before breaks and at the end of work. • Store protective clothing separately.
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9. Physical & Chemical Properties		
9.1	Information on basic physical and chemical properties	(a) Appearance: Amber coloured liquid (b) Odour: mild hydrocarbon (c) Initial boiling point and boiling range: 479.9°C at 760 mmHg (Active ingredient) (d) Flash point: 164 °F (e) Viscosity : 21.4 centipose at 22°C (f) Density : 1.39g/cm ³ (Active ingredient) (g) pH value: 3.76 (h) Solubility(ies): in water: 164.2 mg/L @ 20 deg C (Active ingredient) (i) Explosive properties: None (j) Oxidising properties: Not available (k) Partition coefficient: n-octanol/water: 3.5 (Log Kow) (Active ingredient) (nl) Dissociation constant (pKa) : 1.09(Active ingredient)
9.2	Other information	Specific Gravity (H ₂ O = 1): 1.085 at 22°C
10. Stability and Reactivity		
10.1	Reactivity	Not known
10.2	Chemical stability	Stable at normal temperature and pressure
10.3	Possibility of hazardous reactions	No information known
10.4	Conditions to avoid	No relevant information known
10.5	Incompatible materials	Strong oxidizing agents
10.6	Hazardous decomposition products	Thermal decomposition may produce toxic carbon and nitrogen oxides, and hydrogen chloride.
11. Toxicological Information		
11.1	Information on toxicological effects	(a) acute toxicity: Oral toxicity in category 4 (b) skin corrosion/irritation: Not irritant (c) serious eye damage/irritation: Not irritant (d) respiratory or skin sensitization: Sensitizing (e) germ cell mutagenicity: no evidence in vivo assays (f) carcinogenicity: No evidence of carcinogenicity in rat/ mouse studies (g) Reproductive/ developmental toxicity: No evidence via oral route. (h) STOT-SE/RE: No specific target organ toxicity known indicating permanent deformity

11.2	Numerical measures of toxicity (such as acute toxicity estimates)	CAS no.	Toxicity details
		60207-90-1	<p>Oral LD50 (male rat) = 1,517 mg/Kg</p> <p>Dermal LD50 (rat) = > 2,000 mg/Kg</p> <p>Dermal: skin-rat LD50 > 4000 mg/kg</p> <p>Inhalation LC50 (rat) = > 2.0 mg/L (4-hr)</p> <p>Skin Sensitization: May cause allergic skin reaction – Qualitative in-vivo study</p> <p>Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).</p> <p>GENOTOXICITY: Technical propiconazole, (purity 90.7%) tested with human skin fibroblasts CRL 1121 without activation only; 0, 0.07, 0.37, 1.86 or 9.32 ug/mL, 5 hours in the presence of 3H-thymidine; 4 coverslips per concentration; scored 50 cells per coverslip for grain counts for a total of 200 cells; no evidence of unscheduled DNA synthesis; No adverse effects indicated.</p> <p>Developmental or Reproductive Toxicity: Technical propiconazole (purity 91.9%) fed at 0, 400, 2000 or 5000 ppm via feed, to 10 F0 males and 20 F0 females/group, and 12 F1 males and 24 F1 females for each of the 0, 400 and 2000 ppm dose groups. 5000 ppm dose was discontinued due to 100 % perinatal mortality of the dams. No adverse reproductive effect indicated.</p> <p>Chronic Exposure or Carcinogenicity: Beagle dogs (5 to 7/sex/group) were fed diets containing propiconazole technical material at levels of 0, 5, 50, or 250 ppm (0, 0.125, 1.25, 6.25 mg/kg/day) for 12 months. No dose-related effects were found on mortality, organ or body weights, food consumption, or clinical laboratory parameters. Necropsy and histopathologic examinations revealed evidence of mild irritation of the stomach in males given the highest dietary concentration (250 ppm).</p>
11.3	Chemical if, listed in NTP or IARC or by OSHA as Carcinogens	The chemical is not a listed carcinogen	
11.4	Additional information	Product shows following danger according to internally approved calculation methods for preparation <ul style="list-style-type: none">▪ Harmful▪ Irritant	
12.	Ecological Information		
12.1	Eco – Toxicity	CAS no.	Aquatic toxicity values
		60207-90-1	Fish (ChV) = 0.024 mg/L Fish (Rainbow Trout) 96 hrs LC50 = 0.83 ppm Daphnia (ChV) = 0.120 mg/L Algae (ChV) = 0.354 mg/L Green algae 9 days EC 50 = 0.72 ppm
12.2	Persistence and degradability	CAS no.	Persistence and degradability
		60207-90-1	Biowin1 (Linear Model Prediction) : Does Not Biodegrade Fast Biowin2 (Non-Linear Model Prediction): Does Not Biodegrade Fast Biowin3 (Ultimate Biodegradation Timeframe): Months Biowin4 (Primary Biodegradation Timeframe): Weeks Biowin5 (MITI Linear Model Prediction) : Does Not Biodegrade Fast Biowin6 (MITI Non-Linear Model Prediction): Does Not Biodegrade Fast Biowin7 (Anaerobic Model Prediction): Does Not Biodegrade Fast Ready Biodegradability Prediction: NO
12.3	Bio accumulative potential	CAS no.	BCF
		60207-90-1	Bioaccumulation Estimates (BCFBAF v3.01): Log BCF from regression-based method = 2.121 (BCF = 132.3 L/kg wet-wt)

			Log Biotransformation Half-life (HL) = 0.7927 days (HL = 6.204 days) Log BCF Arnot-Gobas method (upper trophic) = 2.641 (BCF = 437.8) Log BAF Arnot-Gobas method (upper trophic) = 2.644 (BAF = 440.5) log Kow used: 3.72 (expkow database) Propiconazole has low to medium potential to bioaccumulate					
12.4	Mobility in soil	<table><tr><th>CAS no.</th><th>Soil mobility</th></tr><tr><td>60207-90-1</td><td>Degradation half-life 66-170 days; Not persistent in soil Propiconazole has low to medium mobility in soil Propiconazole are mineralized by soil micro organisms</td></tr></table>	CAS no.	Soil mobility	60207-90-1	Degradation half-life 66-170 days; Not persistent in soil Propiconazole has low to medium mobility in soil Propiconazole are mineralized by soil micro organisms		
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12.5	General information	Water hazard class : 2 (self-assessment) – hazardous to water Do not allow the product to reach through ground water, water course or sewage system. Danger to drinking water if even small quantity leaks into the ground system. The mixture is not persistent, bio accumulative or toxic (Not PBT)						
13.	Disposal Considerations							
13.1	Waste treatment methods	(a) Waste treatment containers and methods: Waste treatment containers and methods shall be specified including the appropriate methods of waste treatment of both the substance or mixture and any contaminated packaging (for example, incineration, recycling, land filling) (b) Physical/chemical properties: Physical/chemical properties that may affect waste treatment options shall be specified (c) Sewage disposal: Sewage disposal shall be discouraged (d) Special precautions: Where appropriate, any special precautions for any recommended waste treatment option shall be identified.						
13.2	Additional information:	RCRA HAZARD CLASS: Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.						
14.	Transport Information							
	Information includes RID, ADR, AND, DOT, ICAO, IMDG, IATA-DGR	<div>14.1. UN number : 3082</div> <div>14.2. UN proper shipping name :<ul style="list-style-type: none">✓ ADR: 3082 Environmentally hazardous substance, liquid , n.o.s (Propiconazole),✓ DOT - Environmentally hazardous substance, liquid, n.o.s. (Propiconazole)✓ IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID , N.O.S (Propiconazole) MARINE POLLUTANT✓ IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID , N.O.S (Propiconazole)</div> <div>14.3. Transport hazard class(es): 9</div> <div></div> <div>14.4. Packing group : III</div> <div>14.5. Environmental hazards (e.g., Marine pollutant (Yes/No)) : Yes</div> <div>14.6. Special precautions for user : Warning<ul style="list-style-type: none">✓ Danger Code : 60;✓ EMS Number : F-A,S-F</div> <div>14.7. Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code : Not applicable</div> <div>14.8. Additional information : ADR/ IMDG<ul style="list-style-type: none">✓ Limited quantities (LQ) – 5L; Excepted Quantities (EQ) – E1✓ Maximum net quantity per inner packaging : 30 ml✓ Maximum net quantity per outer packaging : 1000 ml</div>						
15.	Regulatory Information							
15.1	Safety, health and environmental	<ul style="list-style-type: none">• Product related hazard information : The product has been classified and marked in accordance with directives on hazardous materials• Hazard statements:						

	regulations/other legislations	<ul style="list-style-type: none"> ✓ Harmful if swallowed. ✓ Harmful if absorbed through skin. ✓ Causes moderate eye irritation. ✓ Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. • Signal word – WARNING • Precautionary statements : <ul style="list-style-type: none"> ✓ Avoid contact with skin, eyes or clothing. ✓ Wear long sleeved shirt, pants, pants, socks, shoes and waterproof gloves. ✓ Wear protective eyewear. ✓ Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. ✓ Remove and wash contaminated clothing before reuse. ✓ Other regulations: Listed /not listed within the following regulation <ul style="list-style-type: none"> ✓ TSCA (TOXIC SUBSTANCE CONTROL ACT) - listed ✓ EU CLP Regulation (EC) No 1272/2008 - listed ✓ South African National Road Traffic Act, 1996(Act 93 of 1996) – listed ✓ CERCLA (Comprehensive Response Compensation, And Liability Act): NA ✓ SARA TITLE III (Superfund Amendments And Reauthorization Act) 302: NA ✓ IARC Carcinogens :Not Listed ✓ U.S. NTP Carcinogens : Not Listed ✓ California Prop 65 Known Carcinogens : Not Listed ✓ U.S. EPA Carcinogens : C, Possible ✓ TRI Carcinogen Not Listed
16.	Other Information	
16.1	Indication of changes	<p>Section 1: Identification of the substance/mixture and of the company/undertaking</p> <p>Section 2: Hazard Identification - Changes in Classification and Labelling.</p> <p>Section 3: Composition /Information on Ingredients</p> <p>Section 5: Fire-fighting measures</p> <p>Section 6: Accidental Release measures</p> <p>Section 7: Handling and storage.</p> <p>Section 8: Exposure Controls/Personal protection.</p> <p>Section 9: Physical and Chemical properties.</p> <p>Section 10: Stability and Reactivity.</p> <p>Section 11: Toxicological Information.</p> <p>Section 12: Ecological Information.</p> <p>Section 14: Transport labeling</p> <p>Section 15: Regulatory Information</p>
16.2	Abbreviations and acronyms	<ul style="list-style-type: none"> • OSHA: Occupational Safety and Health Administration • GHS: Globally harmonized system on classification and labelling • TWA: Time Weighted Average • STEL: Short Term Exposure Limit • PEL: Permissible Exposure Limits • ACGIH: American Conference of Governmental Industrial Hygienists • NIOSH: National Institute for Occupational Safety and Health • TLV: Threshold Limit Value • MARPOL: Marine pollution • IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk • IARC: International Agency for Research on Cancer • NTP: National Toxicology Program • CAS: Chemical Abstracts Service (division of the American Chemical Society) • LC50: Lethal concentration, 50 percent • LD50: Lethal dose, 50 percent • IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association • IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA) ICAO: International Civil Aviation Organization • ICAO-TI: Technical Instructions by the "International Civil Aviation Organization"

		<ul style="list-style-type: none"> • Sara : Superfund Amendments and Reauthorization Act • WEEL: Workplace Environmental Exposure Level
16.3	Key literature references and sources for data	<ul style="list-style-type: none"> • http://www.chemicalbook.com/CASEN_60207-90-1.htm • http://www.guidechem.com/msds/60207-90-1.html • http://livingturf.com.au/wp-content/uploads/2014/02/Instrata-MSDS.pdf • http://www.sigmaaldrich.com/MSDS • Child, R., et al.: Plant Growth Regul., 13, 203 (1993), Jaleel, C., et al.: Plant Sci., 171, 271 (2006), Jaleel, C., et al.: Pestic Biochem. Physiol., 91, 170 (2008), • http://www.chemnet.com/cas/en/60207-90-1/Propiconazole.html • http://www.chemicalbook.com/CASEN_60207-90-1.htm • EPI Suite calculation • http://www.syngentacropprotection.com/env_stewardship/futuretopics/Prop8-16-05.pdf • PBT profiler • http://www.pesticideinfo.org/List_Chemicals.jsp? • http://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0282_summary.pdf • http://www.thegoodscentscompany.com/data/rw1338691.html • http://toxnet.nlm.nih.gov/cgi-bin/sis/search/a?dbs+hsdb:@term+@DOCNO+6731 • Proceedings-British Crop Protection Conference-Pests and Diseases. Vol. -, Pg. 508, 1979.

Disclaimer: This product is a registered agricultural chemical and must therefore be used in accordance with the container label directions. The information above is believed to be accurate and represents the best information currently available to us. No representation, guarantee or warranties of any kind are made as to its accuracy, suitability for a particular application or results to be obtained from them. This SDS shall be used as a guide only. Users should make their own investigations to determine the suitability of the information for their particular purposes. Consult Sharda USA LLC for further information.