Safety Data Sheet

Revision date: 14.09.2015

Date of issue: 02.04.2015

Sr. No.	Title of the section	Information required in this section			
1.	Identification of the	on of the mixture & of the company			
1.1	Identification of the substance or preparation	1.1.1 Trade Name: Sharda Imidacloprid 2SC T&O ABN: Midash 2SC T&O 1.1.2 Product Registration No.: 83529-2			
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	1.3.1 Company name: Sharda USA LLC 1.3.2 Contact Person: Sharon Gunning, Director, Supply Chain and Administrative Operations 1.3.3 Manufacturing site address: Universal Cooperatives, Inc. 1253 Independence Dr, Napoleon OH 43545 1.3.4 Telephone number: +91 22 5678 2800 1.3.5 Fax number: +91 22 5678 2828, +91 22 5678 2808 1.3.6 E-mail: shardain@vsnl.com ; WEBSITE: http://www.shardausa.com			
1.4	Emergency telephone	1.4.1 Emergency telephone number: 1(800) 222-1222 CHEMTREC PHONE: 1(800) 424-9300 1.4.2 Telephone number of USA importer: (610) 350-6930 1.4.3 Opening hours: 24 hrs			
2.	Hazard Identification				
2.1	Classification of the substance according to Regulation 1910.1200 [GHS]	Classification: Acute Tox. 4 – Oral, Aquatic Chronic 1 Hazard statement: • H302 – Harmful if swallowed • H410 – Very toxic to aquatic life with long lasting effects Signal Word: Warning Hazard pictograms: GHS09 GHS07 Precautionary statements: P501 – Dispose of contents/ container in accordance with local/ regional/national/international regulation P273 – Avoid release to the environment. P391 – Collect spillage P264 – Wash face, hands and any exposed skin thoroughly after handling P270 – Do not eat, drink or smoke when using this product. P330 – Rinse mouth. P301 + P312 – IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.			
2.2	Other Information	Hazard Ratings : NFPA Health: 2 Flammability: 0 Reactivity: 0 Hazard Ratings : HMIS Health: 2 Flammability: 0 Reactivity: 0 Reactivity: 0			
3.	Composition /Inform	nation on Ingredients			
3.1	Composition	List of raw materials in the mixture with hazardous/ non-hazardous additional			
		% Conc. CAS no. Substance name			

		21.7			
		39.79	138261-41-3 NA	Imidacloprid AU-330L	
		0.80	56-81-5	Glycerine	
		0.80	11138-66-2	Xanthan Gum	
		0.20		Proxel BN	
		36.95	NA 7732-18-5	Water	
	Common name	30.73	7732 10 3	vv ater	
3.2	Common name and synonyms	Details not k	nown		
3.3	Classified Impurities and stabilizing additives contributing to classification of the chemical First Aid Measures	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	 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		f poisoning may r the accident is		nours; therefore medical observation for at least
4.3	Immediate medical attention	For 24-hour	Notes for the doctor: No relevant information or antidote available 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.		
5.	Fire Fighting Measu	res			
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	Combustible. Gives off irritating or toxic fumes (or gases) in a fire.			
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 N	Measures			
6.1	Personal precautions, protective equipment and emergency procedures	Person Vent source Envi produce with 6.1.2 For encor gas.	ilate area of spill res. For personal ronmental preca act contaminates local regulations regency respon Ensure adequate	s: Avoid contact with skin or leak, especially confin protection see Section 8. autions: Do not allow to a public waters, inform appoint ders: Use personal protect ventilation. Do not touch	n and eyes. Do not breathe in fumes. ed areas. Shut off/remove any ignition enter drains or water courses. When the propriate authorities immediately in accordance etive equipment. Avoid breathing vapors, mist the spilled material. Avoid the spread of the without risks. Ground all equipment containing

6.2	Methods and material for containment and cleaning up	Sweep spilled substance into covered containers. Carefully collect remainder. Then store and dispose of according to local regulations. Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment.		
6.3	Reference to other section	If appropriate section 8 and 13 shall be referred to		
7.	Handling and Storag	ge		
7.1		7.1.1. Recommendations shall be specified to:		
	Precautions for safe handling	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.		
	g	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		
	Conditions for	(a) How to manage risks associated with storage :		
7.2	safe storage,	No special storage condition indicated		
	including any incompatibilities	(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 138261-41-3 Threshold Limit Value (TLV): Not available 56-81-5 US health exposure limits (NIOSH): PEL (Permissible) = TWA 15 mg/m3 (total) TWA 5 mg/m3 (resp) REL (Recommended) = None establisher TLV: mist 10 mg/m3 as TWA (ACGIH 2005). MAK: 50 mg/m3 (Inhalable fraction) IDLH (Immediate danger) = N.D.		
8.2	Exposure controls	IDEIT (Immediate danger) – 10.D.		
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	 (a) Eye / face protection: Wear appropriate protective eyeglasses, splash goggles or chemical safety goggles and face shield. (b) Skin protection: Wear appropriate protective clothing like impervious lab coat, apron or coveralls. (i) Hand protection: Use compatible chemical / solvent resistant protective gloves made of suitable materials like rubber, plastic, etc, (ii) Other: Wear appropriate boots and other footwear. (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. (d) General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. 		

		Store protective clothing separately.			
		store protective croming separatery.			
9.	Physical & Chemica	Properties			
9.1	Information on basic physical and chemical properties	 (a) Appearance: Liquid (b) Odour: Characteristic (c) Initial boiling point and boiling range: 378.84°C (Active ingredient) (d) Flash point: Not applicable (e) Vapour pressure: <10⁻⁴ Pa (Active ingredient) (f) Bulk Density: 9.15 lb/gal at 25° C (g) pH value: 6.91 (1% dispersion) (h) Solubility(ies): in water: miscible with water (i) Explosive properties: None (j) Flammability: Non Flammable 			
9.2	Other information	Solvent content – 36.95%			
10.	Stability and Reacti	vity			
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	Avoid temperatures above 150°F and below 20°F. High temperature, sunlight, frost			
10.5	Incompatible materials	Strong oxidizing agents			
10.6	Hazardous decomposition products	In case of fire - Cl_2 , NO_x . Thermal decomposition may produce toxic carbon and nitrogen oxides, and hydrogen chloride.			
11.	Toxico-logical Infor	mation			
11.1	Information on toxicological effects	(a) acute toxicity: Acute oral toxicity (category 4) (b) skin corrosion/irritation: not irritant (c) serious eye damage/irritation: not irritant (d) respiratory or skin sensitization: Not sensitizing (e) Carcinogenicity: no known evidence (g) reproductive toxicity: no known evidence (h) STOT-single exposure: no known evidence (i) STOT-repeated exposure: no known evidence			
11.2	Numerical measures of toxicity (such as acute toxicity estimates)	CAS no. Toxicity details			

		138261-41-3 I D4	A.D. 4. 1. 450. //
			60 Rat oral ~450 mg/kg
			60 Rat dermal >5000 mg/kg
			0 Rat inhalation >5323 mg/cu m/4 hr (dust)
			60 Rat inhalation >69 mg/cu m air/4 hr (aerosol)
			onic Exposure or Carcinogenicity/ Wistar Rats /received dietary
			inistration of/ NTN 33893 Technical (94.3% purity) /for 104 weeks/. y animals/sex/group dosed /at levels of/: (Study #1)-0, 100, 300, 900
			, (Study #2)-0, 1800 ppm; Mortalities /after 104 weeks were/ 0 ppm
			16/100, F:26/100), 100 ppm (M/F:6/50), 300 ppm (M:6/50, F:10/50),
			ppm (M:6/50, F:13/50), 1800 ppm (M:5/50, F:10/50). Clinical
			ervations /revealed/ no treatment-related signs; weight gain reduced in
		1800	ppm group (M: 5%), (F: 11%); Hematology /showed/ no treatment-ed effect.
			elopmental or Reproductive Toxicity/ In an/ embryotoxicity study
			uding teratogenicity) with NTN 33893 Technical, 16 female
			its/group /were dosed at/ 0, 7.0, 20.5, 64.3 mg/kg/day (analytical),
			s /were/ administered by gavage from day 6 post coitum through day
		18. 1	Mortalities /observed were/: 0 mg/kg (0/16), 7.0 mg/kg (0/16), 20.5
		mg/	kg (0/16), 64.3 (2/16). Clinical observations /revealed/ reduced food
			umption, body weight loss day 6 to 19, one abortion (64.3 mg/kg/day),
			ced body weight gain day 6 to 19 (20.5 mg/kg/day). /At/ necropsy no
			ment-related lesions /were observed/.
			elopmental: one abortion, two total resorptions, increased post-
			antation loss, reduced mean fetal weight (64.3 mg/kg/day); Maternal
			EL = 20.5 mg/kg/day based on mortality of dams, decreased body
			tht gain for 64.3 mg/kg/day treatment group. Developmental NOEL =
			mg/kg/day based on increased post-implantation loss, decreased fetal
			cht of the offspring in the 64.3 mg/kg/day treatment group onic studies: Fertility study of 64 male employees engaged in the
			ufacture of glycerol. Compared with a control group of 63 workers, no
			ificant differences were found in several sperm quality parameters of
		which	th sperm counts/mL and percent normal forms are considered to be treliable.
			irritation: Slightly irritating after 48 hours application of 0.05 mL on
			an skin in a closed patch test. Further the investigators observed a
		max	imum score for irritation of 4 on a scale of 9 at day 14 during a 21 day
			ication of a 10% solution on human skin.
			irritation: In human eyes, specular microscopy has shown that
			ated application of 100% glycerin to the surface of the eye causes
			nsive changes in the appearance of the endothelium, but most of these
			ges disappear within 90 min after exposure is ended.
			te Exposure / Aqueous 50% glycerin in the anterior chamber of rabbits es significantly less reaction, though within 5 min it visibly dehydrates
			ens, causing its capsule to become wrinkled.
	Chemical if, listed	the i	one, causing no capoute to occome minutes.
11.2	in NTP or IARC	The chamical is not - 1:	etad eeroinegen
11.3	or by OSHA as	The chemical is not a li	sieu carcinogen
	Carcinogens		
A 13'4' 1		Product shows following	g danger according to internally approved calculation methods for
11.4	Additional information	preparation	
	illioi illation	 Harmful 	
12.	Ecological Information		
			tic toxicity values
			O50 /Colinus virginianus/ (Bobwhite quail) oral 152 mg/kg
12.1	Eco – Toxicity		C50 Aedes aegypti (Yellow fever mosquito; increased mortality) 44
		1	/L/48 hr (95% confidence interval: 41-47 ug/L); static, 27 deg C
			C50 Daphnia magna (Water flea; increased mortality) 10.44 mg/L/48 hr
		(9	5% confidence interval: 6.97-17.71 mg/L); static, 27 deg C

	T	T C 01 T	Fil oct 1 (55) 116 005		
		56-81-5	Fish 96-hr LC50 = 1.16e+005		
			Fish 14-day LC50 = 1.11e+005		
			Daphnid 48-hr LC50 = 38159.363		
		CAS no.	Persistence and degradability		
	Persistence and	138261-41-3	Imidacloprid was found to degrade more rapidly in soil under vegetation; half-lives of 48 and 190 days were determined in experiments with and without vegetation, respectively. A half-life of 34 days was reported for imidacloprid in a field experiment using soil (pH = 7.9, 0.52% organic carbon, 16.6% clay, 31.3% silt, 52.1% sand) where citrus products are grown extensively. Imidacloprid was applied to red brown earth to give a concentration of 50 mg/kg.		
12.2	degradability	56-81-5	Biowin1 (Linear Model Prediction): Biodegrades Fast		
	degradability	30 01 3	Biowin (Chical Model Prediction): Biodegrades Fast Biowin (Ultimate Biodegradation Timeframe): Days-Weeks Biowin (Primary Biodegradation Timeframe): Days Biowin (MITI Linear Model Prediction): Biodegrades Fast Biowin (MITI Non-Linear Model Prediction): Biodegrades Fast Biowin (Anaerobic Model Prediction): Biodegrades Fast		
			Ready Biodegradability Prediction: YES		
	+	CAS no.	BCF		
12.3	Bio accumulative	138261-41-3	An estimated BCF of 3.2 was calculated for imidacloprid(SRC), using a log Kow of 0.57 and a regression-derived equation. According to a classification scheme, this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC)		
12.3	potential	56-81-5	Equation Used to Make BCF estimate: Log BCF = 0.50 Correction(s): Value Correction Factors Not Used for Log Kow < 1		
			Estimated Log BCF = 0.500 (BCF = 3.162 L/kg wet-wt)		
12.4	Mobility in soil	Active Ingredient: Soil sorption of imidacloprid was studied using sandy loam and silt loam soils in Germany. Soil batches containing 0.33 mg/kg of imidachloprid were incubated for 100 days. The Koc values in the soil increased from around 200 on the first day to over 800 by day 100. These time dependent results were verified using a column leaching experiment, indicating that sorption of imidacloprid increases with increased soil residence time Water hazard class: 2 (self-assessment) – hazardous to water			
12.5	General information	Danger to drink	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 Considerat	tions			
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) Disposal Method: Sweep spilled substance into containers. Carefully collect remainder and then remove to safe place. Personal protection: P2 filter respirator for harmful particles. Do NOT let this 			
13.2	Additional	chemical enter the environment. Any relevant Community provisions relating to waste shall be referred to. In their absence any			
	information:	relevant national or regional provisions in force shall be referred to.			
14.	Transport Informat	ort Information			
	Information	14.1. UN numbe	er: 3082		
1	includes RID,				
	ADR, AND, DOT, ICAO, IMDG, IATA-DGR	14.2. UN proper shipping name : ✓ ADR: 3082 Environmentally Hazardous Substance, Liquid, n.o.s. (Imidacloprid (ISO)) ✓ DOT: Environmentally hazardous substance, liquid, n.o.s. (Imidacloprid (ISO))			

		✓ IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Imidacloprid (ISO)) MARINE POLLUTANT ✓ IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Imidacloprid (ISO))		
		14.3. Transport hazard class(es): 9		
		14.3. Transport hazard class(es): 9 14.4. Packing group: III 14.5. Environmental hazards (e.g., Marine pollutant (Yes/No)): Yes 14.6. Special precautions for user: Warning ✓ Danger Code: 90; ✓ EMS Number: F-A,S-F 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code: Not applicable 14.8. Additional information: ADR/ IMDG		
í		✓ Limited quantities (LQ) – 5L; Excepted Quantities (EQ) – E1		
		 ✓ Maximum net quantity per inner packaging : 30 ml ✓ Maximum net quantity per outer packaging : 1000 ml 		
		✓ Transport category – 3		
15.	Regulatory Informa			
15.1	Safety, health and environmental regulations/other legislations	 Product related hazard information: The product has been classified and marked in accordance with directives on hazardous materials Hazard statements: Harmful if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Causes moderate eye irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Signal word – CAUTION Precautionary statements: Avoid breathing vapor or mist. Avoid contact with skin, eyes, and clothing. Other regulations: Listed /not listed within the following regulation Sara - section 355 (extremely hazardous substance): none of the ingredients are listed. Sara - section 313 (specific toxic chemical listing): Imidacloprid TSCA: CAS No.: 56-81-5; 11138-66-2; 7732-18-5 listed Proposition 65 (chemical known to cause cancer): none of the ingredients are listed Proposition 65 (chemical known to cause reproductive toxicity for females/ males): none of the ingredients are listed Carcinogenic categories (EPA): none of the ingredients are listed NIOSH - Ca (National Institute of Occupational Health and Safety): none of the ingredients are listed OSHA - Ca (Occupational Health and Safety Administration): none of the ingredients are listed 		
16.	Other Information			
16.1	Indication of changes	Section 1: Identification of the substance/mixture and of the company/undertaking Section 2: Hazard Identification - Changes in Classification and Labelling. Section 3: Composition /Information on Ingredients Section 5: Fire-fighting measures Section 6: Accidental Release measures Section 7: Handling and storage. Section 8: Exposure Controls/Personal protection. Section 9: Physical and Chemical properties. Section 10: Stability and Reactivity.		

		Section 11: Toxicological Information.			
		Section 12: Ecological Information.			
		Section 14: Transport labeling			
		Section 15: Regulatory Information			
		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 The God of th			
		IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous			
		Chemicals in Bulk			
16.2	Abbreviations and	IARC: International Agency for Research on Cancer NTD: Netical Taxicals as Paragram			
16.2	acronyms	NTP: National Toxicology Program CAS: Charried Abstracts Service (division of the American Charried Service)			
	•	CAS: Chemical Abstracts Service (division of the American Chemical Society) LC50 Lethel concentration, 50 percent.			
		LC50: Lethal concentration, 50 percent LD50: Lethal dose 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"			
		Sara : Superfund Amendments and Reauthorization Act			
		WEEL: Workplace Environmental Exposure Level			
		IDLH: Immediately Dangerous to Life or Health			
		MAK: Maximale Arbeitsplatz-Konzentration			
		EPI Suite calculation			
	Key literature references and sources for data	http://www.lookchem.com/cas-138/138261-41-3.html			
		http://www.sigmaaldrich.com/MSDS/MSDS/DisplayMSDSPage.do?country=IN&language			
		=en&productNumber=37894&brand=FLUKA&PageToGoToURL=http%3A%2F%2Fwww			
		.sigmaaldrich.com%2Fcatalog%2Fsearch%3Fterm%3D138261-41-			
		3%26interface%3DCAS%2520No.%26N%3D0%26mode%3Dmatch%2520partialmax%26l			
		ang%3Den%26region%3DIN%26focus%3Dproduct			
		http://www.chemicalbook.com/ProductMSDSDetailCB9730575_EN.htm			
		ECHA website			
		http://www.pesticideinfo.org/Detail_Chemical.jsp?Rec_Id=PC35730			
		http://npic.orst.edu/factsheets/imidacloprid.html			
16.3		1 1			
10.5		http://en.wikipedia.org/wiki/Imidacloprid			
		• http://www.cdc.gov/niosh/ipcsneng/neng1501.html			
		• http://www.trc-canada.com/detail.php?CatNum=I274990&CAS=138261-41-			
		3&Chemical_Name=Imidacloprid&Mol_Formula=C9H10ClN5O2&Synonym=(2E)-			
		1-%5B(6-Chloro-3-pyridinyl)methyl%5D-N-nitro-2-imidazolidinimine;%201-%5B(6-			
		Chloro-3-pyridinyl)methyl%5D-4,5-dihydro-N-nitro-1H-imidazol-2-amine;%201-%5B(6-			
		Chloro-3-pyridinyl)methyl%5D-N-nitro-2-			
		imidazolidinimine;%20Couraze;%20Premis;%20Grubex;			
		http://www.chemnet.com/cas/en/138261-41-3/Imidacloprid.html			
		• http://chem.sis.nlm.nih.gov/chemidplus/rn/138261-41-3			
		 http://pubchem.ncbi.nlm.nih.gov/compound/86418?from=summary 			
		http://www.chemnet.com/cas/en/138261-41-3/Imidacloprid.html			

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.