

SAFETY DATA SHEET

Issue Date 10-Jun-2016

Revision Date 10-Jun-2016

Version 1

1. IDENTIFICATION

Product identifier			
Product Name	Sharda Bifenthrin 2E		
Alternate Brand Name	Bi-Dash 2E		
Other means of identification			
Product Code	83529-48		
UN/ID no	UN3352		
Synonyms	None		
Registration Number(s)	83529-48		
Recommended use of the chemical	and restrictions on use		
Recommended Use	Pesticide		
Uses advised against	No information available		
<u>Details of the supplier of the safety data sheet</u> Manufacturer Address			

Manufacturer Address Sharda USA LLC P.O. Box 640 Hockessin, DE 19707 Website: www.shardausa.com

Emergency telephone number	
Company Phone Number	610-350-6930 (US)
	+91 22 5678 2800 (India)
Emergency Telephone	CHEMTREC: 800-424-9300
	CHEMTREC: 703-527-3887
	POISON CONTROL CENTER: 800-222-1222

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 3
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin sensitization	Category 1
Carcinogenicity	Category 1B
Specific target organ toxicity (repeated exposure)	Category 1
Aspiration toxicity	Category 1
Flammable liquids	Category 4

Emergency Overview

Label elements

Danger

Hazard statements

Toxic if swallowed Harmful if inhaled May cause an allergic skin reaction May cause cancer

Causes damage to organs through prolonged or repeated exposure May be fatal if swallowed and enters airways Combustible liquid



Appearance Liquid

Physical state liquid

Odor Strong Petroleum distillates

Precautionary Statements - Prevention

Obtain special instructions before use Do not handle until all safety precautions have been read and understood Use personal protective equipment as required Wash face, hands and any exposed skin thoroughly after handling Do not eat, drink or smoke when using this product Use only outdoors or in a well-ventilated area Contaminated work clothing should not be allowed out of the workplace Wear protective gloves/protective clothing/eye protection/face protection Do not breathe dust/fume/gas/mist/vapors/spray Keep away from heat/sparks/open flames/hot surfaces. - No smoking

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 INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician Rinse mouth Do NOT induce vomiting In case of fire: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage

Store locked up Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

May be harmful in contact with skin. Very toxic to aquatic life with long lasting effects. Very toxic to aquatic life.

Unknown acute toxicity

1% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable

Mixture

Chemical Name	CAS No	Weight-%
Aromatic petroleum distillate *	Proprietary	30 - 60
Bifenthrin	82657-04-3	25.0
Other inert ingredients *	Proprietary	10 - 30
Naphthalene *	91-20-3	1 - 5

*The exact percentage (concentration) of composition has been withheld as a trade secret. If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

General advice	Call a poison control center or doctor for treatment advice. Have the product containers or label with you when calling a poison control center or doctor, or going for treatment.	
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison control center or doctor for treatment advice.	
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. If skin irritation persists, call a physician. Call a poison control center or doctor for treatment advice.	
Inhalation	Move victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician or poison control center immediately. Administer oxygen if breathing is difficult.	
Ingestion	Call a physician or poison control center immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.	
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.	
Most important symptoms and effe	ects, both acute and delayed	
Symptoms	May cause redness and tearing of the eyes. May cause skin irritation. Coughing and/ or wheezing.	
Indication of any immediate medica	cal attention and special treatment needed	
Note to physicians	This product is a pyrethroid. If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided. Contains petroleum distillates. Vomiting may cause aspiration pneumonia. May cause sensitization in susceptible persons. Treat symptomatically.	

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Dry chemical, CO2, water spray or regular foam. Move containers from fire area if you can do it without risk. Dike fire-control water for later disposal. Water spray, fog or regular foam.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating and toxic gases and vapors. Combustible material.

Hazardous combustion products Carbon oxides. Hydrogen halides.

Explosion data Sensitivity to Mechanical Impact None. Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Keep away from sources of ignition. Prevent fire fighting water from entering surface water or groundwater. Cool containers with spray water from a safe distance. Never use welding or cutting torch on or near container (even empty) because product may ignite explosively.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	Remove all sources of ignition. Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Keep people away from and upwind of spill/leak.
For emergency responders	Use personal protection recommended in Section 8. Ventilate the area.
Environmental precautions	
Environmental precautions	Prevent entry into waterways, sewers, basements or confined areas.
Methods and material for containm	ent and cleaning up
Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Cover liquid spill with sand, earth or other non-combustible absorbent material. Sweep up and shovel into suitable containers for disposal.
	7. HANDLING AND STORAGE
Precautions for safe handling	
Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment as required. Wash thoroughly after handling. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes or clothing. Keep away from heat/sparks/open flames/hot surfaces No smoking. Use only in well-ventilated areas.
Conditions for safe storage, includ	ing any incompatibilities
Storage Conditions	Do not contaminate water, food, or feed by storage or disposal. Keep/store only in original container. Store locked up. Store at ambient conditions. Protect from excessive heat. Keep container tightly closed and store in a cool, dry and well-ventilated place. Do not allow product to freeze. Do not store below 40°F (4°C). If crystals are observed, warm material to above 60°F (16°C) by placing container in warm location. Shake or roll periodically to re-dissolve solids. Keep out of reach of children and animals. Store in original container only. Store in cool, dry place and avoid excessive heat. Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.
Packaging materials	Do not reuse container.
Incompatible materials	Strong oxidizing agents.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Naphthalene	TWA: 10 ppm	TWA: 10 ppm	IDLH: 250 ppm
91-20-3	S*	TWA: 50 mg/m ³	TWA: 10 ppm
		_	TWA: 50 mg/m ³
			STEL: 15 ppm
			STEL: 75 mg/m ³

Legend Skin - Skin Absorber

NIOSH IDLH Immediately Dangerous to Life or Health

Appropriate engineering controls

Engineering Controls	Ensure adequate ventilation, especially in confined areas. And. Showers. Eyewash stations. Ventilation systems.
Individual protection measures, su	ch as personal protective equipment
Eye/face protection	Tight sealing safety goggles.
Skin and body protection	Wear suitable protective clothing. Wear protective butyl rubber gloves. Protective shoes or boots.
Respiratory protection	Ensure adequate ventilation, especially in confined areas. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
General Hygiene Considerations	When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Appearance	liquid Liquid	Odor	Strong Petroleum distillates
Color	dark amber	Odor threshold	No information available
<u>Property</u> pH Melting point / freezing point Boiling point / boiling range Flash point Evaporation rate Flammability (solid, gas) Flammability Limit in Air	Values 5.5 No information available No information available 75 °C / 167 °F No information available No information available	Remarks • Method solution (1 %) Seta Closed Cup	
Upper flammability limit: Lower flammability limit: Vapor pressure Vapor density Relative density Water solubility Solubility in other solvents	6% 1% ~0.5 mmHg 4 (Air = 1) 0.97 Emulsifies No information available	@ 25 °C	

Partition coefficient Autoignition temperature Decomposition temperature Kinematic viscosity Dynamic viscosity Explosive properties Oxidizing properties	No information available No information available No information available 4.5 mm2/s No information available Not an explosive Not applicable	@ 40 °C
Other Information		
Softening point Molecular weight VOC Content (%) Density Bulk density	No information available No information available No information available No information available ~8.1 lb/gal	
	10. STABILITY AND REA	CTIVITY

Reactivity No data available

Chemical stability

 Stable under recommended storage conditions.

 Possibility of Hazardous Reactions

 None under normal processing.

 Conditions to avoid

 Elevated Temperature. Storage near to reactive materials. Heat, flames and sparks.

 Incompatible materials

 Strong oxidizing agents.

 Hazardous Decomposition Products

 Thermal decomposition can lead to release of irritating and toxic gases and vapors. Nitrogen oxides (NOx). Carbon oxides.

 Hydrogen halides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information	Product data is noted below:
	Acute Oral LD50 (rat): 262 mg/kg Acute Dermal LD50 (rabbit): > 2000 mg/kg Irritation (rabbit): Causes minimal eye irritation. Irritation (rabbit): May cause skin irritation. LC50 (rat): 1.86 mg/L (4 HR) Skin Sensitization (guinea pig): Sensitizer
Inhalation	Harmful by inhalation. May cause drowsiness or dizziness.
Eye contact	Contact with eyes may cause irritation.
Skin contact	Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. May be harmful in contact with skin.
Ingestion	Toxic if swallowed. Potential for aspiration if swallowed.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Aromatic petroleum distillate	> 5000 mg/kg (Rat)	> 2 mL/kg (Rabbit)	> 590 mg/m³ (Rat)4 h
Bifenthrin 82657-04-3	= 54.5 mg/kg (Rat)	= 790 mg/kg (Rat)> 2 g/kg (Rabbit)	= 0.61 mg/L (Rat)1 h

Other inert ingredients	= 4920 mg/kg (Rat)	-	= 2 g/m³ (Rat)4 h
Naphthalene 91-20-3	= 1110 mg/kg (Rat)	= 1120 mg/kg (Rabbit)	> 340 mg/m³ (Rat)1 h

Information on toxicological effects

Symptoms

May cause an allergic skin reaction. May cause redness and tearing of the eyes. Vapors may cause drowsiness and dizziness. Coughing and/ or wheezing.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization	May cause s	ensitization by skin cont	lact.	
Germ cell mutagenicity	No information	on available.		
Carcinogenicity	The table bel	ow indicates whether e	ach agency has listed any ingred	ient as a carcinogen.
Chemical Name	ACGIH	IARC	NTP	OSHA
Bifenthrin 82657-04-3	-	Group 2A	-	Х
Naphthalene 91-20-3	A3	Group 2B	Reasonably Anticipated	Х
A3 - Animal Carcinogen IARC (International Age Group 2A - Probably Car Group 2B - Possibly Carc NTP (National Toxicolo Reasonably Anticipated	cinogenic to Humans	r) e a Human Carcinogen	nt of Labor)	
Reproductive toxicity STOT - single exposure	No information No informatio			
STOT - repeated exposu Chronic toxicity Target Organ Effects	Prolonged or Avoid repeat forming syste reactions in v Central nerve	repeated exposure incled ed exposure. May cause em. May cause adverse very susceptible persons bus system, kidney, live	r, blood.	arrow and blood-
Aspiration hazard	May be fatal	if swallowed and enters	airways.	

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document.

ATEmix (oral)	>250.00 mg/kg
ATEmix (dermal)	3,277.00 mg/kg
ATEmix (inhalation-dust/mist)	>1.0 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects

pesticide is extremely toxic to fish and aquatic invertebrates. Use with care when applying in areas adjacent to any body of water. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not make applications when weather conditions favor drift from treated areas. Drift and run-off from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

The use of bifenthrin is prohibited in areas that may result in exposure of endangered species to bifenthrin. Prior to use in a particular county contact the local extension service for procedures and precautions to use to protect endangered species.

17.5 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Aromatic petroleum distillate	2.5: 72 h Skeletonema costatum	19: 96 h Pimephales promelas mg/L	0.95: 48 h Daphnia magna mg/L

	mg/L EC50	LC50 static 1740: 96 h Lepomis macrochirus mg/L LC50 static 45: 96 h Pimephales promelas mg/L LC50 flow-through 2.34: 96 h Oncorhynchus mykiss mg/L LC50 41: 96 h Pimephales promelas mg/L LC50	EC50
Bifenthrin 82657-04-3	-	0.0001 - 0.00019: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.0003 - 0.00038: 96 h Lepomis macrochirus mg/L LC50 flow-through	0.00135 - 0.00195: 48 h Daphnia magna mg/L EC50 Static
Naphthalene 91-20-3	0.4: 72 h Skeletonema costatum mg/L EC50	1.6: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 1.99: 96 h Pimephales promelas mg/L LC50 static 0.91 - 2.82: 96 h Oncorhynchus mykiss mg/L LC50 static 5.74 - 6.44: 96 h Pimephales promelas mg/L LC50 flow-through 31.0265: 96 h Lepomis macrochirus mg/L LC50 static	1.09 - 3.4: 48 h Daphnia magna mg/L EC50 Static 1.96: 48 h Daphnia magna mg/L EC50 Flow through 2.16: 48 h Daphnia magna mg/L LC50

Persistence and degradability

Not readily biodegradable.

: Bifenthrin degrades slowly in soil, the rate being influenced by soil characteristics; it is also stable in the aquatic environment. Bifenthrin, present at a concentration of 4.5 mg/kg and incubated for 24 months, was very stable to biodegradation in one soil (red brown earth: pH 7.1, 1.2% organic carbon, 59.1% sand, 28.3% silt, 10.5% clay) and two bedding materials (sand-dolomite (pH 9.2, 0.1% organic carbon, 80.2% sand) and quarry sand (pH 9.6, 0.2% organic carbon, 55.0% sand)). Degradation rate constants were 5.2X10-4, 4.9X10-4, and 5.0X10-4 /day corresponding to half-lives of 1332, 1410, and 1386 days, respectively. Soil moisture had little effect on the rate of biodegradation.

Bioaccumulation

Bioaccumulative potential.

Chemical Name	Partition coefficient
Aromatic petroleum distillate	6.1
Naphthalene 91-20-3	3.3

Other adverse effects

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT)

	13. DISPOSAL CONSIDERATIONS
<u>Waste treatment methods</u> Disposal of wastes	Pesticide wastes may be acutely hazardous. Improper disposal is a violation of federal law. Disposal should be in accordance with applicable regional, national and local laws and regulations. Contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance on proper disposal of waste product.
Contaminated packaging	Disposal should be in accordance with applicable regional, national and local laws and regulations. Consult product label for additional information. Do not reuse container.
US EPA Waste Number	U165

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Naphthalene	U165	Included in waste streams:	-	U165
91-20-3		F024, F025, F034, F039,		
		K001, K035, K060, K087,		
		K145		

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Naphthalene 91-20-3	-	-	Toxic waste waste number F025 Waste description: Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.	-

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Bifenthrin 82657-04-3	Тохіс
Naphthalene 91-20-3	Toxic

14. TRANSPORT INFORMATION

DOT

UN3352 Pyrethroid pesticide, liquid, toxic 6.1 III IB3, T7, TP2, TP28 UN3352, Pyrethroid pesticide, liquid, toxic mixture, 6.1, III 151
UN3352
Pyrethroid pesticide, liquid, toxic mixture
6.1
 N 2252 - Durathursid acetteide liquid toxic misture (Diferethein) C.4.
UN3352, Pyrethroid pesticide, liquid, toxic mixture (Bifenthrin), 6.1, III
UN3352
Pyrethroid pesticide, liquid, toxic
6.1
III
6L
A3, A4
UN3352, Pyrethroid pesticide, liquid, toxic (Bifenthrin), 6.1, III
UN3352
Pyrethroid pesticide, liquid, toxic
6.1
III

EmS-No	F-A, S-A
Special Provisions	61, 223, 274
Description	UN3352, Pyrethroid pesticide, liquid, toxic (Bifenthrin), 6.1, III; Marine Pollutant

15. REGULATORY INFORMATION

Complies
Complies

Legend:

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 Chemical Substances/European 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 - Beilingings Inventory of Chemicals and Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US 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 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
Bifenthrin - 82657-04-3	1.0
Naphthalene - 91-20-3	0.1
SARA 311/312 Hazard Categories	
Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Naphthalene 91-20-3	100 lb	X	Х	Х

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Naphthalene	100 lb 1 lb	-	RQ 100 lb final RQ
91-20-3			RQ 45.4 kg final RQ RQ 1 lb final
			RQ
			RQ 0.454 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical Name	California Proposition 65		
Naphthalene - 91-20-3	Carcinogen		
U.C. State Dight to Know Degulations			

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Bifenthrin 82657-04-3	Х	-	-
Naphthalene 91-20-3	Х	X	Х

U.S. EPA Label Information

EPA Pesticide Registration Number 83529-48

EPA Statement

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:

Difference between SDS and EPA Pesticide label

WARNING. May be fatal if swallowed. Causes substantial but temporary eye injury. Do not get into eyes or on clothing. Wear protective eyewear such as goggles or safety glasses. Harmful if inhaled, or absorbed through skin. Avoid breathing vapor or spray mist. Avoid contact with skin, eyes, or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	Health hazards 3	Flammability	2	Instability 0	Physical and Chemical Properties -
HMIS Chronic Hazard Star Lege	Health hazards 3* nd *= Chronic	Flammability Health Hazard	2	Physical hazards 0	
Issue Date	10-Jun-20	16			

Revision Date10-Jun-2016Revision Note

No information available

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet