Safety Data Sheet

Issue Date: 25-Nov-2019 v.1

1. Identification

1.1. Product Identifier

Product form	Liquid
Product Name	DB PVL

1.2 Identified Uses

Recommended Use	Pea, Vetch, Lentil Inoculant

1.3 Supplier of the SDS

Dakota Bio
102 E Bailie St
Kentland, IN 47951
Tel. 833-325-6822
Email info@dakotabio.com

2. Hazards Identification

2.1 Classification of the mixture	Not Classified
2.2 Labeling Elements	Not applicable
2.3 Other hazards	None
2.4 Unknown acute toxicity	None

3. Composition on ingredients

3.1 Substance	Liquid

3.2 Mixture of ingredient

Mixture Active Ingredient	Rhizobium leguinosarum biovar viceaa

4. First Aid

4.1 Description of First Aid

First Aid General	If you feel sick, seek medical assistance
First Aid Inhalation	Breath fresh air, rest
First Aid Skin contact	Wash exposed skin
First Aid Eye contact	Rinse immediately, seek medical attention if irritation persists
First Aid ingestion	Rinse mouth, give water, do not induce vomiting

4.2 Symptoms and effects: acute and delayed

Symptoms	No expected hazard under normal use. Dakota Bio uses non pathogenic organisms that are considered to be non-allergenic, and non-irritating.
Symptoms from eye contact	May cause irritation
Special Treatment/medical attention	Treat symptomatically

5. Firefighting Measures

5.1 Extinguishing Media

Suitable extinguishing media	Foam, Dry Powder, Carbon dioxide, Water spray.
Unsuitable extinguishing media	Heavy water stream

5.2 Special Hazards

Fire Hazard	None known
Explosion Hazard	None known
Reactivity	Thermal decomposition, Carbon monoxide, Carbon Dioxide, Hydrocarbons

5.3 Advice for Firefighters

Firefighting instructions	Use water spray or fog for cooling containers
Protective equipment for firefighters	full protective gear as in any fire

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 Non-emergency personnel

Emergency procedures	Stop leak or cause of release.

6.1.2 Emergency responders

Protective equipment	Equip cleanup crew with proper protection
Emergency procedure	Ventilate the area

6.2Environmental precautions None

6.3 Methods and material for contaminant cleanup

Methods	Soak up spills with inert solids, collect spillage, Store away from other chemicals, dispose according local regulation.

6.4 Reference to other sections No additional information

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7. Handling and Storage

7.1 Precautions for safe handling

Precautions	Wash exposed areas with mild soap and water before eating. Avoid contact with skin, eyes, and clothing.
Hygiene measures	Handle with good industrial hygiene and safety practices. Wash hands after handling.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions	Keep in original container, cool, well ventilated away from direct sunlight away from extreme high and low temperatures. Keep container closed when not in use. Do not freeze.
Incompatible materials	Acids, Bases, Oxidizing agents, Reducing agents, Disinfectants, fungicides, and biocides.
Storage Temperature	4-12° C (39-54° F)

7.3 Specific uses No additional information

8 Exposure controls/personal protection

8.1 Control parameters No additional information available

8.2 Exposure controls

Appropriate engineering controls	Ensure adequate ventilation, emergency eye wash fountains, safety showers
Personal protective equipment	Avoid unnecessary exposure. Protective goggles, clothing and gloves.
Hand Protection	Protective gloves.
Eye Protection	Chemical or safety goggles
Skin and body protection	Wear suitable protective clothing.
Respiratory protection	Use approved respiratory protection
Other information	Do not eat, drink, or smoke during use.

9Physical and Chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Opaque Liquid
Color	Opaque Liquid
Odor	Slight
pH	6.5-7.4

9.1 Continued - Information on basic physical and chemical properties

Freezing point	-4 C (25 F)
Boiling point	Not available
Flash point	Not available
Auto ignition temperature	Not applicable
Decomposition temperature	Not available
Flammability (solid, gas)	Not applicable
Vapor pressure	Not available
Relative vapor density at 20C	Not available
Relative Density	Not available
Solubility	Not available
Log Pow	Not available
Log Kow	Not available
Viscosity, kinematic	Not available
Viscosity dynamic	Not available
Explosive properties	Not available
Oxidizing properties	Not available
Explosive limits	Not available

9.2 Other information

Not available

10 Stability and reactivity

10.1 Reactivity	Stable
10.2 Chemical stability	Stable
10.3 Possibility of hazardous reactions	Hazardous polymerization will not occur
10.4 Conditions to avoid	Direct sunlight, extreme temperatures, heat
10.5 Incompatible materials	Acids, Bases, oxidizing agents, reducing agents, disinfectants, fungicides, biocides
10.6 Hazardous decomposition products	Thermal decomposition generates: Carbon dioxide, hydrocarbons

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11 Toxicological information

11.1 Information on toxicological effects

Acute toxicity	Not classified
Skin corrosion/irritation	Not classified
Serious eye damage/irritation	Not classified
Respiratory or skin sensitization	Not classified
Germ cell mutation	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
Target organ toxicity (single exposure)	Not classified
Target organ toxicity (repeat exposure)	Not classified
Aspiration hazard	Not classified
Symptoms/injuries after eye contact	May cause irritation

12. Ecological information

12.1 Toxicity	No additional information available
12.2 Persistence and degradability	No additional information available
12.3 Bio accumulative potential	Not established
12.4 Mobility in soil	No additional information available
12.5 Other adverse effects	
Effects on Ozone	None
Effect on global warming	None
Other	None

13. Disposal consideration

13.1 Waste treatment methods

Waste disposal recommendations	Dispose in safe manner in accordance with local regulations.

14. Transport information

In accordance with DOT	Not regulated for transport
Additional information	
Other	No supplemental information needed

15. Regulatory information

15.1 National regulations	This material is not considered hazardous

16. Other Information

NFPA health hazard	1 – Exposure could cause irritation but only minor injury if no treatment is given
NFPA fire hazard	0 – Materials will not burn
NFPA reactivity	0 – Stable, even under fire conditions, not reactive with water.

Information and recommendations listed herein are presented in good faith and believed to be correct as of the date hereof. Dakota Bio or any of its subsidiaries makes no representations as to the completeness or accuracy thereof.