SAFETY DATA SHEET

Prepared in accordance with US HazCom 2012 (US GHS)

Date of Compilation : 26.03.20264 Revision No. 04 Version: EN/04

SECTION 1: Identification of the mixture and of the company/undertaking

1.1. Product identifier

Product Name: Calfuze™

1.2. Relevant identified uses of the mixture and uses advised against

Relevant identified uses:

Used as agricultural input

Uses advised against:

No information available

1.3. Details of the supplier of the safety data sheet

Manufacturer:

Privi Life Sciences Private Limited

Reg. office: Privi House, A-71, TTC, Thane Belapur Road, Near Koparkhairane Railway Station, Navi Mumbai 400709, Maharashtra, India. www.privilifesciences.com

Factory: 22/1A, Dhatav MIDC, Roha 402109, District: Raigad, Maharashtra, India

Imported and distributed by:

Privi Life Sciences USA Corporation dba Privi Life Sciences USA Corp
645 Howard Ave, Somerset NJ 08873, USA

1.4. Emergency telephone number:

Contact: info@priviamericas.com; 732-960-4504

Poison Control Centre, United States: Emergency telephone number:

1-800-222-1222

SECTION 2: Hazards identification

2.1. Classification of the mixture

Classification according to US HazCom 2012 (US OSHA GHS):

Reproduction Toxicity, Category 1B
Eye Damage, Category 1

Additional Information:

None

2.2. Label elements

Labeling according to US HazCom 2012 (US OSHA GHS):	
Hazard pictogram:	
Signal word:	Danger!
Hazard statements:	May damage fertility or the unborn child. Causes serious eye damage.
Precautionary statements:	Do not handle until all safety precautions have been read and understood. IF exposed or concerned: Get medical advice/attention. Store locked up. Dispose of contents/container to an approved disposal plant in accordance with national/local regulations. Wear eye protection/face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards

Not known

SECTION 3: Composition/information on ingredients

3.1. Mixture

CAS No.	Chemical Name	Weight (% w/w) content (Typical or range)	Classification according to US HazCom 2012 (US OSHA GHS)
10043-35-3	Boric acid	18.3	Reproduction Toxicity, Category 1B
7733-02-0	Zinc Sulfate	14	Eye Damage, Category 1 Acute Oral Toxicity, Category 4

Note: None of the other ingredients of the product are hazardous under US HazCom 2012 (US OSHA GHS) and thus not required to be reported in this section.

SECTION 4: First aid measures

4.1. Description of first aid measures

following inhalation:

Immediately remove casualty to fresh air and keep them warm. If breathing has stopped, and if safe to do so, apply artificial resuscitation using a barrier device. Seek medical attention if symptoms persist or develop.

following skin contact:

Immediately rinse the affected area with plenty of water, or soap and water, for at least five minutes. Seek medical attention if symptoms develop or if there's reason for concern.

following eye contact:

Immediately rinse the affected eye with plenty of water or eye wash fluid for at least 15 minutes while separating the eyelids. Remove contact lenses if safe and easy to do so and continue rinsing. Avoid contaminated water coming into contact with the other eye or face. Seek medical attention if symptoms persist or develop

following ingestion:
Do NOT induce vomiting. Rinse out mouth with water if casualty is fully conscious. Seek medical attention if symptoms develop, or if there's reason for concern

notes for the doctor:

Treat symptomatically

4.2. Most important symptoms and effects, both acute and delayed

On skin contact: May cause Skin irritation
On Eye Contact: May cause eye irritation and reddening

4.3. Indication of any immediate medical attention and special treatment needed

No information available

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Dry extinguishing media, foam, carbon dioxide, Water spray or fog

5.2. Special hazards arising from the mixture

Burning may produce Sulphur dioxide (SO2). Sulphur trioxide, Zinc Oxide and irritating, toxic and obnoxious fumes

5.3. Advice for fire-fighters

Avoid dust generation. Self-contained breathing equipment. Individual protective equipment (gloves, boots (chemical resistant) and suitable clothing). Seek emplacement with your back against the wind.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with the eyes, skin and clothing. Do not act without appropriate protective equipment.

6.2. Environmental precautions

Recover the whole product that is possible in a clean dry plastic or metallic container. Prevent material from entering drains or water courses

6.3. Methods and material for containment and cleaning up

Small spillage: Vacuum or sweep up material and place in a disposal container.
Large spillage: Scoop solid spill into closing containers. This material and its container must be disposed of in a safe way, and as per local legislation

6.4. Reference to other sections

Please see Section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid dust generation. Do not ingest. Avoid contact with eyes and skin. Do not breathe dust. Wear suitable protective clothing.
Ensure thorough ventilation of stores and work areas.
Keep away from incompatibles (please refer to Section 10.5).
Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed and sealed until ready for use.
Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible materials. Protect containers against physical damage and check regularly for leaks.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limit values:

No data available

8.2. Exposure controls

Appropriate engineering controls:

Provide exhaust ventilation or other engineering controls. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Individual protection measures:

Eye/face protection:

Use tight-fitting goggles, face shield or safety glasses (refer to U.S. OSHA 29 CFR 1910.133) with side shields if eye contact might occur.

Skin/Hand protection:
Avoid skin contact. Use chemically resistant gloves (refer to U.S. OSHA 29 CFR 1910.138), boots, and apron if risk of skin contact.
Gloves suitable for permanent contact Material: natural rubber/natural latex, polychloroprene, butyl-rubber, Polyvinylchloride, nitrile rubber/nitrile latex, fluoro carbon rubber.
Minimum Thickness of Gloves material preferred: 0.3 mm
When prolonged or frequently repeated contact may occur, a glove with breakthrough time greater than 240 minutes is recommended.
When only brief contact is expected, a glove with breakthrough time greater than 60 minutes is recommended

Respiratory protection:

No personal respiratory protective equipment normally required. If engineering controls do not maintain airborne concentrations below recommended exposure, an approved, properly fitted respirator (refer to U.S. OSHA 29 CFR 1910.134) should be used

Thermal Hazards:
No information available

Environmental exposure controls:

Do not allow run-off from fire fighting to enter drains or water courses

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Off White- Brown Fine powder
Odour	Characteristic
Odour threshold	No data available
pH (1% solution in water)	5.0 - 6.0

Melting point/freezing point	No data available
Initial boiling point and boiling range	No data available
Flash point	> 230 °C (Closed cup)
Evaporation rate	Not applicable
Flammability (solid, gas)	Non-flammable
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Relative Density	No data available
Solubility in water	98% @20°C
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Bulk density (g/ml)	0.6-0.8
Explosive properties	Non-explosive
Oxidising properties	Non-oxidising

9.2. Other information

Not available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal temperatures and pressures. The product is reactive with the incompatible materials (please refer section 10.5).

10.2. Chemical stability

Stable under normal temperatures and pressures

10.3. Possibility of hazardous reactions

Hazardous polymerization cannot occur.

10.4. Conditions to avoid

Keep away from heat and moisture/water

10.5. Incompatible materials

Strong acids and alkalies, phosphorus, finely divided aluminium, magnesium, strong oxidizing agents

10.6. Hazardous decomposition products

Burning may produce Sulphur dioxide (SO2). Sulphur trioxide, Zinc Oxide and irritating, toxic and obnoxious fumes

SECTION 11: Toxicological information

The product has not been tested for its toxicological properties. All the information / data given below is publicly available or estimated.

11.1. Information on toxicological effects

Acute toxicity:
Rat Oral LD50 (estimated): > 2000 mg/kg bw
Rabbit Dermal LD50 Rabbit (estimated): > 2000 mg/kg bw

Skin corrosion/irritation:

No data available for the product as such.
Based on the available data / information on ingredients, the product is not expected to be skin irritant or corrosive

Serious eye damage/irritation:

No data available for the product as such.
Based on the below Zinc Sulphate data and its resulting GHS classification when compared with US OSHA GHS classification criteria, the product has been classified as Eye damage Cat. 1

Available study data / information on Zinc Sulfate:
In a well-performed eye irritation/corrosion study, conducted according to Directive 92/69/EEC B.5 and OECD guideline 405, three male New Zealand White rabbits were treated by instillation of approximately 98.1 mg of zinc sulphate (ZnSO4.7H2O) into the conjuctival sac of one eye. The other eye remained untreated and served as control. The eyes (unrinsed) were examined at 1, 24, 48 and 72 hours and 7, 14 and 21 days after instillation.
No symptoms of systemic toxicity were observed and no mortality occurred.
Corneal injury was seen as slight dulling of the normal lustre (opacity grade 0) and/or epithelial damage (10% of the corneal area) in two animals. This injury had resolved within 24 hours in one animal and within 72 hours in the other animal.
Irritation of the conjuctivae was seen as redness (mean scores over 24-72 hours 2, 2.7 and 2.7), chemosis (mean scores 2, 2.7 and 3.7) and discharge.
Yellow/white spots were observed in the tissue of the lower eyelid, nictitating membrane and/or sclera in all animals from day 7 until termination. These spots were described as signs of necrosis and consisted of encapsulated material of unknown origin which caused protrusions at termination of the study. Reduced elasticity of the eyelids was noted in one animal, 72 hours and 7 days after instillation.
Based on the degree and persistence of the corneal injury, zinc sulphate is considered to cause severe ocular irritation.

Respiratory or skin sensitization:

No data available for the product as such.
Based on the available data / information on ingredients, the product is not expected to be Respiratory or skin sensitizer

Germ cell mutagenicity:

No data available for the product as such.
Based on the available data / information on ingredients, the product is not expected to be mutagen

Carcinogenicity:

No data available for the product as such.
Based on the available data / information on ingredients, the product is not expected to be Carcinogen
No ingredient is listed by NTP, IARC or OSHA as a carcinogen

Reproductive toxicity:

No data available for the product as such.

Based on the below Boric acid data and its GHS classification when compared with US OSHA GHS classification criteria, the product has been classified as Reproductive Toxicity Category 1B

Available data / information on Boric acid:

A multigeneration study in the rat (Weir, 1966) gave a NOAEL for fertility in males of 17.5 mg B/kg/day.

STOT-single exposure: No data available for the product as such. Based on the available data / information on ingredients, the product is not expected to be target organ toxic on single exposure

STOT-repeated exposure: No data available for the product as such. Based on the available data / information on ingredients, the product is not expected to be target organ toxic on repeated exposure

Aspiration hazard: No data available for the product as such. Based on the available data / information on ingredients, the product is not expected to be Aspiration hazard

SECTION 12: Ecological information

12.1. Toxicity

No data available

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Other adverse effects

No information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Dispose of contents/container in accordance with local/regional/national/international regulation.

SECTION 14: Transport information

The material is not regulated by ADR/RID/IATA/IMDG/US DOT

Regulation	ADR/RID/ADN/ ICAO-TI/IATA-DGR	IMDG Code	US DOT
14.1. UN Number	N/A	N/A	N/A
14.2. UN proper shipping name	N/A	N/A	N/A
14.3. Transport hazard class(es)	N/A	N/A	N/A
14.4. Packing group	N/A	N/A	N/A
14.5. Environmental hazards	N/A	N/A	N/A
14.6. Special precaution for users	N/A	N/A	N/A
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC code	N/A	N/A	N/A

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the mixture

All the chemical ingredients are listed in TSCA inventory and designated as Active.
Zinc Sulfate (CAS# 7733-02-0) is listed in CERCLA.

SECTION 16: Other information

Key literature references and sources for data:

TOXNET; eChemPortal

Disclaimer:

All information, recommendations and suggestions appearing herein are based upon sources believed to be reliable. However, it is the user's responsibility to determine the safety, toxicity and suitability for its own use of this product. Privi Life Sciences Private Limited does not assume any liability arising out of the use by others of this product.