Safety Data Sheet
RUMENSMART (ADI093.1)

SDS Revision Date: **03/16/2018**

1. Identification

1.1. Product identifier

Product Identity	RUMENSMART (ADI093.1)
Alternate Names	RUMENSMART (ADI093.1)

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

Intended use	Additive for animal feed.
Application Method	See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet

Company Name	Adisseo USA Inc. 4400 North Point Pkwy, Suite 275 Alpharetta, GA 30022
Emergency	
24 hour Emergency Telephone No.	Carechem24 Toll Free (800) 727-5083
Customer Service: Adisseo USA Inc.	For Product Information: (800) 727-1019 Tel. 678.339.1500 – Fax 678.339.1600

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Skin Irrit. 2;H315	Causes skin irritation.
Eye Dam. 1;H318	Causes serious eye damage.
Aquatic Chronic 3;H412	Harmful to aquatic life with long lasting effects.

2.2. Label elements

Danger

H315 Causes skin irritation.
H318 Causes serious eye damage.
H412 Harmful to aquatic life with long lasting effects.

[Prevention]:

P264 Wash thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves / eye protection / face protection.

[Response]:

P302+352 IF ON SKIN: Wash with plenty of soap and water.

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P310 Immediately call a POISON CENTER or doctor / physician.

P321 Specific treatment (see information on this label).

P332+313 If skin irritation occurs: Get medical advice / attention.

P362 Take off contaminated clothing and wash before reuse.

[Storage]:

No GHS storage statements

[Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Butanoic acid, 2-hydroxy-4-(methylthio)-, calcium salt (2:1) **CAS Number: 0004857-44-7**	**75 - 100**	**Skin Irrit. 2;H315** **Eye Irrit. 2;H319**	**[1]**
Butanoic acid, 2-hydroxy-4-(methylthio)- **CAS Number: 0000583-91-5**	**10 - 25**	**Skin Irrit. 2;H315** **Eye Dam. 1;H318** **Aquatic Chronic 3;H412**	**[1]**

In accordance with paragraph (i) of §1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.
[1] Substance classified with a health or environmental hazard.
[2] Substance with a workplace exposure limit.
[3] PBT-substance or vPvB-substance.
*The full texts of the phrases are shown in Section 16.

Section 4. First aid measures

4.1. Description of first aid measures

General SPECIAL NOTE FOR PHYSICIAN: All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should

	be given to the possibility that overexposure to materials other than this product may have occurred. Treat symptomatically. No specific antidote available.
Inhalation	Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious, place in the recovery position and obtain immediate medical attention. Give nothing by mouth.
Eyes	Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.
Skin	Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.
Ingestion	Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If potentially dangerous quantities of this material have been swallowed, call a physician immediately.

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

Overview	No specific symptom data available. Treat symptomatically. See section 2 for further details.
Eyes	Causes serious eye damage.
Skin	Causes skin irritation.

Section 5. Fire-fighting measures

5.1. Extinguishing media

Suitable methods of extinction
In the event of a fire, use :
- sprayed water or water mist
- foam
- powder
- carbon dioxide (CO2)

Unsuitable methods of extinction
In the event of a fire, do not use :
- water jet

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: The thermal decomposition may release/form :
- carbon monoxide (CO)
- carbon dioxide (CO2)
- sulphur dioxide (SO2)

5.3. Advice for fire-fighters

Firefighters should wear NIOSH/MSHA-approved self-contained breathing apparatus and full protective clothing. Cool containers exposed to fire with water.
Closed containers may rupture due to buildup of pressure when exposed to extreme heat.

Due to the toxicity of the gas emitted on thermal decomposition of the products, fire-fighting personnel are to be equipped with autonomous insulating breathing apparatus.

ERG Guide No. ---

Section 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

6.2. Environmental precautions

Do not allow spills to enter drains or waterways.

6.3. Methods and material for containment and cleaning up

Retrieve the product by mechanical means (sweeping/vacuuming) : do not generate dust. If necessary, wash with water after collection.

Section 7. Handling and storage

7.1. Precautions for safe handling

Handle containers carefully to prevent damage and spillage.

Always wash hands after handling. Remove and wash contaminated clothing before re-using.
Fire prevention: Handle in well-ventilated areas. Prevent access by unauthorized personnel.
Recommended equipment and procedures: For personal protection, see section 8. Observe precautions stated on label and also industrial safety regulations. Avoid inhaling dust. Also provide breathing apparatus for certain short tasks of an exceptional nature and for emergency interventions. In all cases, recover emissions at source. Avoid eye contact with this mixture.
Prohibited equipment and procedures: No smoking, eating or drinking in areas where the mixture is used.

See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities

Keep the container tightly closed in a dry, well-ventilated place.
Packaging: Always keep in packaging made of an identical material to the original. Keep the container tightly closed in a dry, well-ventilated place. Packaging Always keep in packaging made of an identical material to the original.

Incompatible materials: Keep away from :
- oxidizing agents
- acids

See section 2 for further details. - [Storage]:

7.3. Specific end use(s)

No data available.

Section 8. Exposure controls and personal protection

8.1. Control parameters

Exposure

CAS No.	Ingredient	Source	Value
0000583-91-5	Butanoic acid, 2-hydroxy-4-(methylthio)-	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
0004857-44-7	Butanoic acid, 2-hydroxy-4-(methylthio)-, calcium salt (2:1)	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit

The exposure limits for nuisance dust are: OSHA PEL: 15 mg/m3 (50 mppcf*) TWA, ACGIH 10 mg/m3.

8.2. Exposure controls

Respiratory Avoid breathing dust. Type of FFP mask :
Wear a disposable half-mask dust filter in accordance with standard EN149.
Category :
- FFP1

Eyes Wear safety glasses with side shields to protect the eyes. An eye wash station is suggested as a good workplace practice.

Skin Skin contact should be minimized through the use of chemical-resistant gloves and boots, and suitable protective clothing. Wear PVC or rubber gloves to keep skin contact to a minimum. Refer to the manufacturer's recommendations regarding the suitability of any gloves used.

Engineering Controls Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

Other Work Practices The following general measures should be taken when working or handling this material: 1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored. 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet. 3) Wash exposed skin promptly to remove accidental splashes of contact with this material.

See section 2 for further details.

Section 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Clear beige, powder or dust. Solid
Odor	Characteristic
Odor threshold	Not determined
pH	(aqueous solution) : 4.2 (1%) 4.0 (5%) 4.0 (10%)
Melting point / freezing point	Not Measured
Initial boiling point and boiling range	Not Measured
Flash Point	Not relevant
Evaporation rate (Ether = 1)	Not Measured
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	**Lower Explosive Limit:** Not Measured **Upper Explosive Limit:** Not Measured
Vapor pressure (Pa)	Not relevant
Vapor Density	Not Measured
Specific Gravity	Not Measured
Solubility in Water	Soluble. ~ 5g/100g (25°C)
Partition coefficient n-octanol/water (Log Kow)	Not Measured
Auto-ignition temperature	Not Measured
Decomposition temperature	Not Measured
Viscosity (cSt)	Not Measured
Density	0.4 - 0.6
Apparent bulk density	Apparent bulk density (Packed) : 0.540 Apparent bulk density (Loose packed) : 0.470
Granulometry	310 µm +/- 35 µm (D50) - > 1000µm (max 2%) - < 100µm (max 4%)

9.2. Other information

No other relevant information.

Section 10. Stability and reactivity

10.1. Reactivity

Hazardous Polymerization will not occur.

10.2. Chemical stability

Stable under normal circumstances.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Avoid :
- formation of dusts
- heat
- exposure to light

Dusts can form an explosive mixture with air.

10.5. Incompatible materials

Keep away from :
- oxidising agents
- acids

10.6. Hazardous decomposition products

The thermal decomposition may release/form :
- carbon monoxide (CO)
- carbon dioxide (CO2)
- sulphur dioxide (SO2)

Section 11. Toxicological information

Acute toxicity

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Butanoic acid, 2-hydroxy-4-(methylthio)-, calcium salt (2:1) - (4857-44-7)	No data available	No data available	No data available	No data available	No data available
Butanoic acid, 2-hydroxy-4-(methylthio)- - (583-91-5)	No data available	No data available	No data available	No data available	No data available

Carcinogen Data

CAS No.	Ingredient	Source	Value
0000583-91-5	Butanoic acid, 2-hydroxy-4-(methylthio)-	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0004857-44-7	Butanoic acid, 2-hydroxy-4-(methylthio)-, calcium salt (2:1)	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

Classification	Category	Hazard Description
Acute toxicity (oral)	---	Not Applicable
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable

Skin corrosion/irritation	2	Causes skin irritation.
Serious eye damage/irritation	1	Causes serious eye damage.
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Not Applicable
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

Section 12. Ecological information

12.1. Toxicity

Harmful to aquatic life with long lasting effects.

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Butanoic acid, 2-hydroxy-4-(methylthio)-, calcium salt (2:1) - (4857-44-7)	Not Available	Not Available	Not Available
Butanoic acid, 2-hydroxy-4-(methylthio)- - (583-91-5)	Not Available	Not Available	Not Available

12.2. Persistence and degradability

There is no data available on the preparation itself.

12.3. Bioaccumulative potential

Not Measured

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available.

Section 13. Disposal considerations

13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

Section 14. Transport information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	Not Regulated	Not Regulated	Not Regulated
14.2. UN proper shipping name	Not Regulated	Not Regulated	Not Regulated
14.3. Transport hazard class(es)	**DOT Hazard Class:** Not Applicable	**IMDG:** Not Applicable **Sub Class:** Not Applicable	**Air Class:** Not Applicable
14.4. Packing group	Not Applicable	Not Applicable	Not Applicable

14.5. Environmental hazards

IMDG Marine Pollutant: No;

14.6. Special precautions for user

No further information

Section 15. Regulatory information

Regulatory Overview The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

Toxic Substance Control Act (TSCA) All components of this material are either listed or exempt from listing on the TSCA Inventory.

WHMIS 1988 Classification D2B E

US EPA Tier II Hazards

Fire: No

Sudden Release of Pressure: No

Reactive: No

Immediate (Acute): Yes

Delayed (Chronic): No

EPCRA 302 Extremely Hazardous:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 313 Toxic Chemicals:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Carcinogens (>0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Developmental Toxins (>0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Female Repro Toxins (>0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Male Repro Toxins (>0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Section 16. Other information

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The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H303 May be harmful if swallowed.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H402 Harmful to aquatic life.

H412 Harmful to aquatic life with long lasting effects.

Disclaimer: The information and recommendations in this data sheet are believed to be correct and reliable. However, the data are offered for consideration and verification by the user and Adisseo Canada Inc. offers no guarantee, warranty or representation as to the accuracy or completeness of the data.

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