



Safety Data Sheet

Material Name: DuraFight For Cow Stress, Product Code: 2604

SDS ID: 2604

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

DuraFight For Cow Stress, Product Code: 2604

Product Use

Livestock Feed Supplement.

Restrictions on Use

Use Only as Directed on Label.

Details of the supplier of the safety data sheet

Ralco Nutrition, Inc.
1600 Hahn Road
PO Box 1083
Marshall, MN 56258
Phone: 1-800-533-5306

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Serious Eye Damage/Eye Irritation - Category 2A

Skin Sensitization - Category 1A

Carcinogenicity - Category 2

Reproductive Toxicity - Category 2

Hazardous to the Aquatic Environment - Acute - Category 2

Hazardous to the Aquatic Environment - Chronic - Category 3

GHS Label Elements

Symbol(s)



Signal Word

Warning

Hazard Statement(s)

Causes serious eye irritation.

May cause an allergic skin reaction.

Suspected of causing cancer.

Suspected of damaging fertility or the unborn child.

Toxic to aquatic life.

Harmful to aquatic life with long lasting effects.



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Precautionary Statement(s)

Prevention

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Wear eye protection/face protection.

Avoid breathing dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.

Avoid release to the environment.

Wear protective gloves.

Response

IF exposed or concerned: Get medical advice/attention.

IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: 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.

Storage

Store locked up.

Disposal

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

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
14977-37-8	Potassium magnesium sulfate	30-55
471-34-1	Calcium carbonate	15-40
n/a	Microlite	10-35

Section 4 - FIRST AID MEASURES

Inhalation

If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

Skin

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

If skin irritation or rash occurs: Get medical advice/attention.

Eyes

Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

Ingestion

Rinse mouth thoroughly with water.



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Most Important Symptoms/Effects

Acute

Causes serious eye irritation.

Delayed

May cause an allergic skin reaction.

Suspected of causing cancer.

Suspected of damaging fertility or the unborn child.

Note to Physicians

Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Water spray, carbon dioxide, regular dry chemical, fire-fighting foam.

Unsuitable Extinguishing Media

None Known.

Fire Fighting Measures

Co-ordinate fire-fighting measures to the fire surroundings.

Special Protective Equipment and Precautions for Firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Use Personal Protective equipment as required.

Avoid breathing dust/fume/gas/mist/vapors/spray.

Methods and Materials for Containment and Cleaning Up

Collect in closed and suitable containers for disposal.

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

Environmental Precautions

Toxic to aquatic life.

Harmful to aquatic life with long lasting effects.

Avoid release to the environment.

Hazardous to the Aquatic Environment - Acute.

Hazardous to the Aquatic Environment - Chronic.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Do not handle until all safety precautions have been read and understood.

Use Personal Protective equipment as required.

Avoid breathing dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.

Wash contaminated clothing before reuse.

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



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Conditions for Safe Storage, Including any Incompatibilities

Store locked up.

Store in a well-ventilated place.

Keep cool. Store in a dry place.

Store in a closed container. Protect from sunlight.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Calcium carbonate	471-34-1
NIOSH:	10 mg/m ³ TWA total dust ; 5 mg/m ³ TWA respirable dust
Diatomaceous earth	61790-53-2
OSHA (US):	((80)/(% SiO ₂) mg/m ³ TWA); 20 mppcf TWA
Zinc oxide	1314-13-2
ACGIH:	2 mg/m ³ TWA respirable particulate matter
	10 mg/m ³ STEL respirable particulate matter
NIOSH:	5 mg/m ³ TWA dust and fume
	10 mg/m ³ STEL fume
	15 mg/m ³ Ceiling dust
	500 mg/m ³ IDLH
OSHA (US):	5 mg/m ³ TWA fume ; 15 mg/m ³ TWA total dust ; 5 mg/m ³ TWA respirable fraction
Mexico:	2 mg/m ³ TWA [VLE-PPT] respirable fraction
	10 mg/m ³ STEL [PPT-CT] respirable fraction

ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)

There are no biological limit values for any of this product's components.

Engineering Controls

Sufficient to maintain atmospheric concentrations below applicable regulatory limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear eye protection/face protection.

Skin Protection

Wear suitable protective clothing.

Respiratory Protection

In case of inadequate ventilation wear respiratory protection.

Glove Recommendations

Wear protective gloves.



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Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Light green powder.	Physical State	Solid.
Odor	Odorless.	Color	In a Red and Black Capsule.
Odor Threshold	Not available	pH	Not available
Melting Point	Not available	Boiling Point	Not available
Boiling Point Range	Not available	Freezing point	Not available
Evaporation Rate	Not available	Flammability (solid, gas)	Not available
Autoignition Temperature	Not available	Flash Point	Not available
Lower Explosive Limit	Not available	Decomposition temperature	Not available
Upper Explosive Limit	Not available	Vapor Pressure	Not available
Vapor Density (air=1)	Not available	Specific Gravity (water=1)	Not available
Water Solubility	Not available	Partition coefficient: n-octanol/water	Not available
Viscosity	Not available	Kinematic viscosity	Not available
Solubility (Other)	Not available	Density	Not available
Molecular Weight	Not available		

Section 10 - STABILITY AND REACTIVITY

Reactivity

No known hazardous reactions.

Chemical Stability

The product is stable under storage at normal ambient temperatures.

Conditions to Avoid

Avoid contact with incompatible materials.

Mildly corrosive to metals in the presence of moisture.

Incompatible Materials

Acids.

Hazardous decomposition products

Hydrogen chloride gas

Thermal decomposition products

Can yield oxides of Sulfur when heated above 1000° F. (537°C)



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Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Skin Contact

Yes.

Eye Contact

Yes.

Acute and Chronic Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Calcium carbonate (471-34-1)

Oral LD50 Rat 6450 mg/kg

Potassium chloride (7447-40-7)

Oral LD50 Rat 2600 mg/kg

Choline chloride (67-48-1)

Oral LD50 Rat 3400 mg/kg

White mineral oil (8042-47-5)

Oral LD50 Rat >5000 mg/kg

Niacin (59-67-6)

Oral LD50 Rat 7 g/kg

Dermal LD50 Rat >2000 mg/kg

Zinc oxide (1314-13-2)

Oral LD50 Rat >5000 mg/kg (in water ;no deaths occurred)

Calcium pantothenate, D-form (137-08-6)

Oral LD50 Rat >10 g/kg

Vitamin A acetate (127-47-9)

Oral LD50 Rat 4980 mg/kg

Copper sulfate pentahydrate (7758-99-8)

Oral LD50 Rat 960 mg/kg

Dermal LD50 Rabbit >8 g/kg

Vitamin D3 (67-97-0)

Oral LD50 Rat 42 mg/kg

Dermal LD50 Rat 61 mg/kg (males)

Inhalation LC50 Rat 0.13 - 0.38 mg/L 4 h

Riboflavin (83-88-5)

Oral LD50 Rat >10 g/kg

Product Toxicity Data

Acute Toxicity Estimate

Dermal	> 2000 mg/kg
Inhalation - Dust and Mist	> 5 mg/L
Oral	> 2000 mg/kg



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Immediate Effects

No information on significant adverse effects.

Delayed Effects

No information on significant adverse effects.

Irritation/Corrosivity Data

No data available.

Respiratory Sensitization

No data available.

Dermal Sensitization

No data available.

Component Carcinogenicity

Menadione sodium bisulfite	130-37-0
IARC:	Monograph 76 [2000] (Group 3 (not classifiable))
Diatomaceous earth	61790-53-2
IARC:	Monograph 68 [1997] (Group 3 (not classifiable))
Cobalt[II] carbonate hydroxide (2:3) monohydrate	51839-24-8
IARC:	Monograph 52 [1991] (Group 2B (possibly carcinogenic to humans))
OSHA:	Present

Germ Cell Mutagenicity

No data available.

Tumorigenic Data

No data available.

Reproductive Toxicity

No data available.

Specific Target Organ Toxicity - Single Exposure

No data available.

Specific Target Organ Toxicity - Repeated Exposure

No data available.

Aspiration hazard

No data available.

Medical Conditions Aggravated by Exposure

No data available.



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Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity

Potassium chloride	7447-40-7
Fish:	LC50 96 h Lepomis macrochirus 1060 mg/L [static] ; LC50 96 h Pimephales promelas 750 - 1020 mg/L [static]
Algae:	EC50 72 h Desmodesmus subspicatus 2500 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 825 mg/L IUCLID ; EC50 48 h Daphnia magna 83 mg/L [Static] EPA
Choline chloride	67-48-1
Algae:	EC50 72 h Desmodesmus subspicatus >500 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna Straus >500 mg/L IUCLID ; EC50 48 h Daphnia magna >320 mg/L [Static] EPA
White mineral oil	8042-47-5
Fish:	LC50 96 h Lepomis macrochirus >10000 mg/L
Niacin	59-67-6
Fish:	LC50 96 h Salmo trutta 520 mg/L
Algae:	EC50 72 h Desmodesmus subspicatus 89.93 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 77 mg/L IUCLID
Zinc oxide	1314-13-2
Fish:	LC50 96 h Danio rerio 1.55 mg/L [static]
Vitamin A acetate	127-47-9
Fish:	LC50 96 h Oncorhynchus mykiss 1.37 mg/L
Copper sulfate pentahydrate	7758-99-8
Fish:	LC50 96 h Lepomis macrochirus 0.66 - 1.15 mg/L [semi-static] ; LC50 96 h Lepomis macrochirus 0.96 - 1.8 mg/L [static] ; LC50 96 h Oncorhynchus mykiss 0.1478 - 0.165 mg/L [flow-through] ; LC50 96 h Oncorhynchus mykiss 0.09 - 0.19 mg/L [static] ; LC50 96 h Pimephales promelas 0.6752 mg/L [static]
Invertebrate:	EC50 48 h Daphnia magna 0.147 - 0.227 mg/L [Static] EPA



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Vitamin E acetate	7695-91-2
Fish:	LC50 96 h Oncorhynchus mykiss >100 mg/L [static]
Potassium iodide (KI)	7681-11-0
Fish:	LC50 96 h Danio rerio >100 mg/L [static]

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents/container in accordance with local/regional/national/international regulations.
Avoid release to the environment.

Component Waste Numbers

The U.S. EPA has not published waste numbers for this product's components.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

No Classification assigned.

International Bulk Chemical Code

This material contains one or more of the following chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

Potassium chloride	7447-40-7
IBC Code:	Category Z (solution)
Choline chloride	67-48-1
IBC Code:	Category Z (solution)

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

None of this product's components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

SARA Section 311/312 (40 CFR 370 Subparts B and C) reporting categories

Carcinogenicity; Reproductive Toxicity; Respiratory/Skin Sensitization; Serious Eye Damage/Eye Irritation

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Diatomaceous earth	61790-53-2	No	No	Yes	Yes	No
Zinc oxide	1314-13-2	Yes	Yes	Yes	Yes	Yes

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

Not listed under California Proposition 65.



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Canada Regulations

Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

Zinc oxide	1314-13-2	1 %
Potassium iodide (KI)	7681-11-0	1 %

Component Analysis - Inventory

Potassium magnesium sulfate (14977-37-8)

US	CA	AU	CN	EU	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2
No	No	No	No	No	No	No	No	No

KR - REACH CCA	MX	NZ	PH	TH-TECI	TW	VN (Draft)
No	No	No	No	No	No	No

Calcium carbonate (471-34-1)

US	CA	AU	CN	EU	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2
Yes	DSL	Yes	Yes	EIN	Yes	Yes	Yes	No

KR - REACH CCA	MX	NZ	PH	TH-TECI	TW	VN (Draft)
No	Yes	Yes	Yes	Yes	Yes	Yes

Microlite (n/a)

US	CA	AU	CN	EU	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2
No	No	No	No	No	No	No	No	No

KR - REACH CCA	MX	NZ	PH	TH-TECI	TW	VN (Draft)
No	No	No	No	No	No	No



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Section 16 - OTHER INFORMATION

Preparation Date

SDS: 06/18/2019

Supersedes: 10/05/2016

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania*; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CFR - Code of Federal Regulations (US); CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EC - European Commission; EEC - European Economic Community; EIN - European Inventory of (Existing Commercial Chemical Substances); EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; F - Background (for Venezuela Biological Exposure Indices); IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; ISHL - Japan Industrial Safety and Health Law; IUCLID - International Uniform Chemical Information Database; JP - Japan; Kow - Octanol/water partition coefficient; KR KECI Annex 1 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL); KR KECI Annex 2 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL), KR - Korea; LD50/LC50 - Lethal Dose/ Lethal Concentration; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; MX - Mexico; Ne - Non-specific; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; Nq - Non-quantitative; NSL - Non-Domestic Substance List (Canada); NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PEL - Permissible Exposure Limit; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH - Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; Sc - Semi-quantitative; STEL - Short-term Exposure Limit; TCCA - Korea Toxic Chemicals Control Act; TDG - Transportation of Dangerous Goods; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TW - Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; VLE - Exposure Limit Value (Mexico); VN (Draft) - Vietnam (Draft); WHMIS - Workplace Hazardous Materials Information System (Canada).

Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of Ralco's knowledge, information and belief at the date of preparation. The information provided is designed only as guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The conditions or methods of said handling, storage, use, and disposal of this product are beyond our control. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expenses arising out of or connected with the handling, storage, use, or disposal of this product. The information provided 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 text.