

ROVIMIX® E 50-SD**5015759**

Version 1.1

Revision Date 03/20/2017

Date of last issue: 11/05/2014

SECTION 1. IDENTIFICATION

Product name : ROVIMIX® E 50-SD

Manufacturer or supplier's details

Company name of supplier : DSM Nutritional Products

Address : 45 Waterview Blvd
Parsippany NJ 07054-1298

Telephone : (908) 475-7373

Telefax : (908) 475-7406

Emergency telephone number : 1-800-424-9300 (24 HR CHEMTREC, CA & US); Outside CA & US +1-703-741-5970 (COLLECT CALLS ACCEPTED)

E-mail address of person responsible for the SDS : sds.nutritionalproducts@dsm.com

Recommended use of the chemical and restrictions on use

Recommended use : Additive for animal nutrition in premixes and compound feeds

SECTION 2. HAZARDS IDENTIFICATION**GHS classification in accordance with 29 CFR 1910.1200**

Combustible dust

GHS label elements

Signal word : Warning

Hazard statements : May form combustible dust concentrations in air.

Other hazards

Risk of dust explosion.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Brief description of the product : Mixture (preparation) containing active ingredient and auxiliary substances

Hazardous components

Component	CAS-No.	Weight percent
silicon dioxide, amorphous	112945-52-5	1 - 5

Further ingredients

Component	CAS-No.	Weight percent
3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-yl acetate (dl- α -tocopheryl acetate)	7695-91-2	50 - 60

SECTION 4. FIRST AID MEASURES

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- General advice : No hazards which require special first aid measures.
- If inhaled : Move to fresh air.
If symptoms persist, call a physician.
- In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
- In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : No specific symptoms known.
- Notes to physician : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water
Foam
- Specific hazards during fire-fighting : None known.
- Further information : Consider dust explosion hazard.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Avoid dust formation.
- Environmental precautions : Try to prevent the material from entering drains or water courses.
- Methods and materials for containment and cleaning up : Sweep up and shovel.

SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed. Take precautionary measures against static discharges.
- Advice on safe handling : For personal protection see section 8.

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Conditions for safe storage : To maintain product quality, do not store in heat or direct sunlight.

Keep container tightly closed and dry.

Materials to avoid : No special restrictions on storage with other products.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
silicon dioxide, amorphous	112945-52-5	TWA (Dust)	20 Million particles per cubic foot (Silica)	OSHA Z-3
		TWA (Dust)	80 mg/m ³ / %SiO ₂ (Silica)	OSHA Z-3

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.
In case of high dust concentration use a dust mask applicable to local conditions.

Hand protection
Remarks : Glove material: for example nitrile rubber

Eye protection : Safety glasses

Skin and body protection : Lightweight protective clothing

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

Appearance : powder

Colour : white - pale yellow

Odour : No information available.

Odour Threshold : No information available.

pH : No data available

Melting point/range : not determined

Boiling point/boiling range : not determined

Flash point : Not applicable

Flammability (solid, gas) : May form combustible dust concentrations in air.

Vapour pressure : Not applicable

Relative vapour density : Not applicable

Density : not determined

Water solubility : dispersible

Partition coefficient: n- : Not applicable

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octanol/water	
Auto-ignition temperature	: No data available
Thermal decomposition	: Decomposes on heating. Potential for exothermic hazard
Explosive properties	: Not explosive
Oxidizing properties	: No data available

Other information

Combustibility index for deposited dust	: 4 (23 °C)
Dust explosion properties	: KSt value: 123 bar·m/s (Milled sample, Median value of the tested sample 0.047 mm, Loss on drying 3 %; ISO 6184)
Dust explosion class	: St1 (Milled sample, Median value of the tested sample 0.047 mm, Loss on drying 3 %; ISO 6184)
Maximum explosion overpressure	: 7.1 bar (Milled sample, Median value of the tested sample 0.047 mm, Loss on drying 3 %; ISO 6184)
Minimum ignition energy	: 10 - 30 mJ (Milled sample, Median value of the tested sample 0.056 mm, Loss on drying 3 %, EN 13821) The Minimum ignition energy (MIE) of a dust/air mix depends on the particle size the water content and the temperature of the dust. The finer and the dryer the dust the lower the MIE.
	: General remark: The indicated dust explosion characteristics are only valid for this product and are sensitive to the sample's parameters.
Powder volume resistivity	: ca. 2E+12 Ohmm (Product sample, Median value of the tested sample 0.106 mm, Loss on drying 2.1 %) The material can accumulate static charge and can therefore cause electrical ignition.
Minimum ignition temperature of a dust/air mix	: 320 °C (Median value of the tested sample 0.056 mm) determined in the BAM oven

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No hazards to be specially mentioned.
Chemical stability	: Stable under recommended storage conditions.
Possibility of hazardous reactions	: Dust may form explosive mixture in air.
Conditions to avoid	: Heat
Incompatible materials	: Strong acids and strong bases Strong oxidizing agents
Hazardous decomposition products	: No decomposition if used as directed.

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SECTION 11. TOXICOLOGICAL INFORMATION

- Acute oral toxicity : Acute toxicity estimate : > 5,000 mg/kg
(Calculation method)
- Skin irritation : Prolonged skin contact may cause skin irritation.
- Eye irritation : Dust contact with the eyes can lead to mechanical irritation.
- Sensitisation : Does not cause skin sensitisation. (human)
Test substance: active ingredient
- : no photoallergenic skin reaction (Guinea pig)
Test substance: active ingredient
- Genotoxicity in vitro : negative (Ames test, OECD Test Guideline 471)
Test substance: active ingredient
- : not genotoxic (In vitro cytogenicity study in mammalian cells,
OECD Test Guideline 473)
Test substance: active ingredient
- Carcinogenicity : No indication for carcinogenicity known.
- IARC No component of this product present at levels greater than or
equal to 0.1% is identified as probable, possible or confirmed
human carcinogen by IARC.
- OSHA No component of this product present at levels greater than or
equal to 0.1% is identified as a carcinogen or potential carci-
nogen by OSHA.
- NTP No component of this product present at levels greater than or
equal to 0.1% is identified as a known or anticipated carcino-
gen by NTP.
- Reproductive toxicity : No indication for adverse effects on fertility known.
- Teratogenicity : not teratogenic
Test substance: active ingredient
NOAEL: > 1,600 mg/kg bw/d (Rat, OECD Test Guideline 414)
- STOT - single exposure (A- : The substance or mixture is not classified as specific target
cute exposure) organ toxicant, single exposure.
- STOT - repeated exposure : NOAEL (Oral, Rat) : 2000 mg/kg bw/d
Subacute toxicity study (28 days)
Test substance: active ingredient
(OECD Test Guideline 407)
- : NOAEL (Oral, Rat) : 500 mg/kg bw/d
Sub-chronic toxicity study (90-day)
Test substance: active ingredient

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(OECD Test Guideline 408)

Aspiration toxicity : No aspiration toxicity classification

SECTION 12. ECOLOGICAL INFORMATION**Toxicity**

Toxicity to fish (Chronic toxicity) : Oncorhynchus mykiss (rainbow trout)
 NOEC (28 d) 100 mg/l
 (nominal concentration)
 (OECD Test Guideline 215)

Persistence and degradability

Biodegradability : Not readily biodegradable.
 17 % (28 d)
 (OECD Test Guideline 301F)
 Test substance: active ingredient

Bioaccumulative potential

Bioaccumulation : No data available

Partition coefficient: n-octanol/water : Not applicable

Mobility in soil

Distribution among environmental compartments : No data available

Other adverse effects

Regulation 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
 Remarks This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : There is no data available for this product.

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : User must determine if any wastes generated exhibit hazardous characteristics as per 40 CFR Part 261 or other national / local legislation.

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

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SECTION 14. TRANSPORT INFORMATION**International Regulations****UNRTDG**

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations**49 CFR**

Not regulated as a dangerous good

Remarks : Not classified as dangerous in the meaning of transport regulations.

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Fire Hazard**SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.**Clean Air Act**

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

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US State Regulations**Massachusetts Right To Know**

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-yl acetate	7695-91-2
Dextrin, hydrogen 1-octenylbutanedioate	68070-94-0
Syrups, corn, dehydrated	68131-37-3

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION**Full text of other abbreviations**

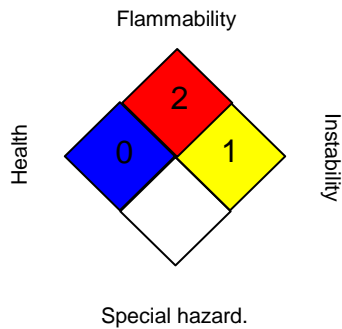
AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); EC_x - Concentration associated with x% response; EHS - Extremely Hazardous Substance; EL_x - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErC_x - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC₅₀ - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC₅₀ - Lethal Concentration to 50 % of a test population; LD₅₀ - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative
ACGIH = American Conference of Governmental Industrial Hygienists. CFR = Code of Federal Regulations. EPA = Environmental Protection Agency. NIOSH = National Institute of Occupational Safety and Health. OSHA = Occupational Safety and Health Administration. STEL = Short term exposure limit. TLV = Threshold Limit Value. TWA = Time Weighted Average.

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Further information**NFPA:****HMIS® IV:**

HEALTH	/	0
FLAMMABILITY		2
PHYSICAL HAZARD		1

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks.

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The information provided in this 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.

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