ROCOAT® Niacinamide 33 1/3%



Date of last issue: 31.10.2014

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

Revision Date 04.10.2017

1.1 Product identifier

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Trade name : ROCOAT® Niacinamide 33 1/3%

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

| Use of the Sub- | : For the fortification of foods, Ingredient/additive for dietary |
|-----------------|---|
| stance/Mixture | supplements |

1.3 Details of the supplier of the safety data sheet

| Company | : DSM Nutritional Products Europe Ltd PO Box 2676 CH-4002 Basel |
|---|---|
| Telephone Telefax E-mail address of person responsible for the SDS | : +41618157777 : +41618157770 : sds.nutritionalproducts@dsm.com |

1.4 Emergency telephone number

+41 848 00 11 77 (Carechem 24 International)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Eye irritation, Category 2 H319: Causes serious eye irritation.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

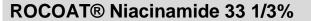
Hazard pictograms

| | | $\langle \mathbf{v} \rangle$ | |
|--------------------------|---|--|--|
| Signal word | : | Warning | |
| Hazard statements | : | H319 | Causes serious eye irritation. |
| Precautionary statements | : | Prevention: P264 P280 Response: P305 + P351 + P3 | ter for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| | | P337 + P313 | If eye irritation persists: Get medical advice/ attention. |

2.3 Other hazards

Risk of dust explosion.

SECTION 3: Composition/information on ingredients



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

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3.1 Substances

Not applicable

3.2 Mixtures

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Hazardous components

| Chemical name | CAS-No. EC-No. Registration number | Classification | Concentration (% w/w) |
|---------------|--|--------------------|--------------------------|
| nicotinamide | 98-92-0 202-713-4 | Eye Irrit. 2; H319 | >= 30 - < 50 |

For explanation of abbreviations see section 16.

Further ingredients

| Chemical name | CAS-No. EC-No. Registration number | GHS Classification | Concentration [%] |
|-----------------------------|--|--------------------|----------------------|
| silicon dioxide (amorphous) | 7631-86-9 231-545-4 | | < 5 |

SECTION 4: First aid measures

4.1 Description of first aid measures

| General advice | : Move out of dangerous area. Show this safety data sheet to the doctor in attendance. |
|--------------------------------|---|
| If inhaled | : Move to fresh air. Consult a physician after significant exposure. |
| In case of skin contact | Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. If symptoms persist, call a physician. |
| In case of eye contact | Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist. |
| 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. Obtain medical attention. |
| 4.2 Most important symptoms | and effects, both acute and delayed |
| Symptoms | : No specific symptoms known. |
| 4.3 Indication of any immediat | e medical attention and special treatment needed |
| Treatment | : Treat symptomatically. |

SECTION 5: Firefighting measures

according to Regulation (EC) No. 1907/2006

| 0 0 () | | |
|---|---------------------------------|-----------------------------------|
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| 5.1 Extinguishing media | | |
| Suitable extinguishing media | : Dry powder | |
| | Water Foam | |
| Unsuitable extinguishing media | : High volume water jet | |
| 5.2 Special hazards arising from | the substance or mixture | |
| Specific hazards during fire- fighting | : Heating or fire can release | toxic gas. |
| 5.3 Advice for firefighters | | |
| Special protective equipment for firefighters | : In the event of fire, wear se | lf-contained breathing apparatus. |
| Further information | : Consider dust explosion ha | zard. |

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Avoid breathing dust.

6.2 Environmental precautions

Try to prevent the material from entering drains or water courses.

6.3 Methods and material for containment and cleaning up

Pick up and arrange disposal without creating dust.

6.4 Reference to other sections

For personal protection see section 8. For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

| Advice on safe handling | Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the plication area. | e ap- |
|---|--|-------|
| Advice on protection against fire and explosion | Avoid dust formation. Provide appropriate exhaust venti at places where dust is formed. Take precautionary mea against static discharges. | |
| Hygiene measures | Handle in accordance with good industrial hygiene and practice. Wash hands before breaks and at the end of w day. | |

according to Regulation (EC) No. 1907/2006

| coording to Regulation (EC) No. 1907/2006 | | | |
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| 7.2 Conditions for safe storag | e, including any incompatibilities | | |
| Requirements for storage areas and containers | : Keep container tightly closed | and dry. | |
| | To maintain product quality, d light. | o not store in heat or direct sun- | |
| 7.3 Specific end use(s) | | | |
| Specific use(s) | : Not applicable | | |
| SECTION 8: Exposure cont | rols/personal protection | | |
| 8.1 Control parameters | | | |
| • | th occupational exposure limit values. | | |
| 8.2 Exposure controls | | | |
| Personal protective equip | oment | | |
| Eye protection | : Safety glasses with side-shiel | ds | |
| Hand protection | | | |
| | : Consider the hazard characte special workplace conditions v type of protective gloves. Glove material: for example ni | when selecting the appropriate | |
| Skin and body protection | : Choose body protection accor tration of the dangerous subst | rding to the amount and concen- tance at the work place. | |
| Respiratory protection | : In the case of dust or aerosol approved filter. | formation use respirator with an | |
| | | | |

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| Appearance | : free flowing powder |
|--|--|
| Colour | : white - pale yellow |
| Odour | : odourless |
| Odour Threshold | : No information available. |
| рН | : No data available |
| Melting point/range | : ca. 50 °C |
| Boiling point/boiling range | : not determined |
| Flash point | : not determined |
| Flammability (solid, gas) | : May form combustible dust concentrations in air. |
| Vapour pressure | : Not applicable |
| Relative vapour density | : Not applicable |
| Density | : not determined |
| Water solubility | : not determined |
| Partition coefficient: n- octanol/water | : Not applicable |
| Auto-ignition temperature | : No data available |

DSM

according to Regulation (EC) No. 1907/2006

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|---|---|--|
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| Thermal decomposition | : Decomposes on heating. Potential for exothermic haza | ard |
| Explosive properties | : Not explosive | |
| Oxidizing properties | : No data available | |
| 9.2 Other information | | |
| Combustibility index for deposited dust | : 3 (23 °C) | |
| Dust explosion properties | : KSt value: 160 bar·m/s (Mille tested sample 0.042 mm; ISC | |
| Dust explosion class | : St1 (Milled sample, Median v mm; ISO 6184) | alue of the tested sample 0.042 |
| Maximum explosion over- pressure | : 7.3 bar (Milled sample, Media 0.042 mm; ISO 6184) | an value of the tested sample |
| Minimum ignition energy | 0.057 mm, Loss on drying 1.7 The Minimum ignition energy on the particle size the water | edian value of the tested sample 1 %, EN 13821) r (MIE) of a dust/air mix depends content and the temperature of yer the dust the lower the MIE. |
| | | ed dust explosion characteristics and are sensitive to the sample's |
| Powder volume resistivity | ed sample 0.143 mm, Loss o | ample, Median value of the test- on drying 0.7 %) static charge and can therefore |
| Minimum ignition tempera- ture of a dust/air mix | : 330 °C (Median value of the determined in the BAM oven | tested sample 0.035 mm) |
| Particle size | : <= 50 % <= 0.075 mm | |

SECTION 10: Stability and reactivity

10.1 Reactivity

No hazards to be specially mentioned.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Dust may form explosive mixture in air.

10.4 Conditions to avoid

Heat

10.5 Incompatible materials

Strong acids and strong bases Strong oxidizing agents DSM



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10.6 Hazardous decomposition products

Nitrogen oxides (NOx)

Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

| Acute oral toxicity | : | LD50 (Rat): > 2,500 mg/kg Active ingredient (OECD Test Guideline 423) |
|--|---|---|
| Skin irritation | : | No skin irritation (Rabbit, OECD Test Guideline 404, 4 h, Active ingredient) |
| Eye irritation | : | Dust contact with the eyes can lead to mechanical irritation. |
| Sensitisation | : | Did not cause sensitization. (Guinea pig, Buehler Test, OECD Test Guideline 406, Active ingredient) |
| Genotoxicity in vivo | : | not genotoxic (In vivo micronucleus test, Mouse, OECD Test Guideline 474, Active ingredient) |
| Carcinogenicity | : | No indication for carcinogenicity known. |
| Reproductive toxicity | : | No indication for adverse effects on fertility known. |
| STOT - single exposure (A- cute exposure) | : | The substance or mixture is not classified as specific target organ toxicant, single exposure. |
| STOT - repeated exposure | : | NOAEL (Oral, Rat, 28 d) : 215 mg/kg bw/d Test substance: Active ingredient Subacute toxicity study (28 days) (OECD Test Guideline 407) |
| Further information | : | May cause irritation of respiratory tract. |
| Aspiration toxicity | : | No aspiration toxicity classification |

SECTION 12: Ecological information

12.1 Toxicity

| Toxicity to fish | : Poecilia reticulata (guppy) LC50 (96 h) > 1,000 mg/l |
|------------------|---|
| | Test substance: Active ingredient |
| | (OECD Test Guideline 203) |

according to Regulation (EC) No. 1907/2006



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12.2 Persistence and degradability

| Biodegradability | : Readily biodegradable. |
|------------------|-----------------------------------|
| | 95 % (28 d) |
| | (OECD Test Guideline 301E) |
| | Test substance: active ingredient |

12.3 Bioaccumulative potential

| Bioaccumulation | : No data available |
|--|---------------------|
| Partition coefficient: n- octanol/water | : Not applicable |

12.4 Mobility in soil

| Distribution among environ- | : | No data available |
|-----------------------------|---|-------------------|
| mental compartments | | |

12.5 Results of PBT and vPvB assessment

| Assessment | : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. |
|--|--|
| 12.6 Other adverse effects | |
| Additional ecological informa- tion | : There is no data available for this product. |

SECTION 13: Disposal considerations

| 13.1 Waste treatment methods | |
|------------------------------|--|
| Product | Do not contaminate ponds, waterways or ditches with chemi- cal or used container. Do not dispose of waste into sewer. Offer surplus and non-recyclable solutions to a licensed dis- posal company. |
| Contaminated packaging | : Dispose of as unused product. Do not re-use empty containers. |

SECTION 14: Transport information

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

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14.6 Special precautions for user

Remarks

Not classified as dangerous in the meaning of transport regulations.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

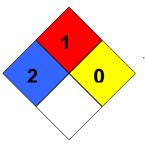
Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mix-ture

NFPA Classification

: Health hazard: 2 Fire Hazard: 1 Reactivity Hazard: 0



15.2 Chemical safety assessment

Not applicable

SECTION 16: Other information

Full text of H-Statements

H319

: Causes serious eye irritation.

Full text of other abbreviations

Eye Irrit.

: Eye irritation

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx -Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx -Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; 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; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; REACH - Regulation (EC) No

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1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

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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