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1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : RONOXAN® D20,20 kg

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

Use of the : Additive for human nutrition to be used for the fortification Substance/Mixture and/or colouration and/or stabilisation of foods and dietary

supplements

1.3 Details of the supplier of the safety data sheet

Company : DSM Nutritional Products France S.A.

Boulevard d'Alsace 1 FR-68128 Village Neuf

Telephone : +33389696900 Telefax : +33389696625

E-mail address : sds.nutritionalproducts@dsm.com

Responsible/issuing person

1.4 Emergency telephone number

+33 389 69 69 00

2. Hazards identification

2.1 Classification of the substance or mixture

Classification (67/548/EEC, 1999/45/EC)

Not a hazardous substance or mixture.

2.2 Label elements

Special labelling of certain : Safety data sheet available for professional user on request.

mixtures

2.3 Other hazards

Risk of dust explosion.

3. Composition/information on ingredients

Brief description of the

product

: Mixture

3.2 Mixtures

Hazardous components

| Chemical Name | CAS-No. EC-No. Registration number | Classification (67/548/EEC) | Classification (REGULATION (EC) No 1272/2008) | Concentration [%] |
|----------------------------|---|--------------------------------|---|-------------------|
| 6-O-palmitoylascorbic acid | 137-66-6 205-305-4 | R52-R53 | Eye Irrit. 2; H319 Aquatic Chronic 3; H412 | >= 1 - < 5 |
| d-γ-tocopherol | 54-28-4 200-201-5 | R53 | Aquatic Chronic 4; H413 | >= 1 - < 5 |

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For the full text of the R-phrases mentioned in this Section, see Section 16. For the full text of the H-Statements mentioned in this Section, see Section 16.

4. First aid measures

4.1 Description of first aid measures

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.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : No specific symptoms known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water

Foam

5.2 Special hazards arising from the substance or mixture

Specific hazards during

firefighting

: None known.

5.3 Advice for firefighters

Special protective equipment : In the event of fire, wear self-contained breathing apparatus.

for firefighters

Further information : Collect contaminated fire extinguishing water separately. This

must not be discharged into drains.

Fire residues and contaminated fire extinguishing water must

be disposed of in accordance with local regulations.

Consider dust explosion hazard.

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6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.

Avoid dust formation.

6.2 Environmental precautions

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

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel.

6.4 Reference to other sections

For personal protection see section 8.

For disposal considerations see section 13.

7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : For personal protection see section 8.

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.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage

areas and containers

: Keep container tightly closed and dry.

Advice on common storage : No special restrictions on storage with other products.

7.3 Specific end use(s)

Specific use(s) : not applicable

8. Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

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 : for example nitrile rubber

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Eye protection : Safety glasses

Skin and body protection : Lightweight protective clothing

Hygiene measures : General industrial hygiene practice.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : powder

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) : Not classified as flammable as defined by the transport

regulations.

Vapour pressure : not applicable
Relative vapour density : not applicable
Density : not determined
Water solubility : not determined
Partition coefficient: n- : not applicable

octanol/water

Auto-ignition temperature : No data available
Thermal decomposition : No data available
Explosive properties : No data available
Oxidizing properties : No data available

9.2 Other information

No data available

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

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Heat.

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10.5 Incompatible materials

Strong acids and strong bases Strong oxidizing agents

10.6 Hazardous decomposition products

No decomposition if used as directed.

11. Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity

6-O-palmitoylascorbic acid : LD50 (rat): > 10 000 mg/kg

d-γ-tocopherol : LD50 (rat): > 4 000 mg/kg

Test performed using a similar product.

Skin corrosion/irritation : Prolonged skin contact may cause skin irritation.

Serious eye damage/eye

irritation

: Dust contact with the eyes can lead to mechanical irritation.

12. Ecological information

12.1 Toxicity

Toxicity to fish

6-O-palmitoylascorbic acid : Salmo gairdneri (rainbow trout)

LC50 (96 h) 51 mg/l

suspension

No data is available on the product itself.

12.2 Persistence and degradability

Biodegradability

6-O-palmitoylascorbic acid : Inherently biodegradable.

48 % (28 d)

(OECD Test Guideline 302C)

suspension

No data is available on the product itself.

12.3 Bioaccumulative potential

Bioaccumulation : No data available Partition coefficient: not applicable

octanol/water

12.4 Mobility in soil

Distribution among : No data available

environmental compartments

12.5 Results of PBT and vPvB assessment

Assessment : not determined

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12.6 Other adverse effects

Additional ecological

information

: There is no data available for this product.

13. Disposal considerations

13.1 Waste treatment methods

Product 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.

14. Transport information

14.1 UN number

ADR

Not dangerous goods

RID

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

14.2 Proper shipping name

ADR

Not dangerous goods

RID

Not dangerous goods

IMDG

Not dangerous goods

Not dangerous goods

14.3 Transport hazard class

ADR

Not dangerous goods

RID

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

14.4 Packing group

ADR

Not dangerous goods

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

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14.5 Environmental hazards

ADR

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Not dangerous goods

RID

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

14.6 Special precautions for user

Not classified as dangerous in the meaning of transport regulations.

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

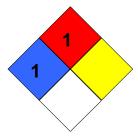
No data available

15. Regulatory information

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

NFPA Classification : Health hazard: 1

Fire Hazard: 1



15.2 Chemical Safety Assessment

not applicable

16. Other information

Full text of R-phrases referred to under sections 2 and 3

R52 Harmful to aquatic organisms.

R53 May cause long-term adverse effects in the aquatic environment.

Full text of H-Statements referred to under sections 2 and 3.

H319 Causes serious eye irritation.

H412 Harmful to aquatic life with long lasting effects.

H413 May cause long lasting harmful effects to aquatic life.

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.

Abbreviations: 67/548/EEC= Dangerous Substances Directive. 1999/45/EC= Dangerous Preparations Directive. Regulation (EC) No. 1272/2008= Regulation on classification, labelling and packaging of substances and mixtures. DNEL= Derived No-Effect Level. PNEC= Predicted No-Effect Concentration. NFPA= National Fire Protection Association (USA). IATA= International Air

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Transport Association. IMDG= International Maritime Dangerous Goods. RID= International Rule for Transport of Dangerous Substances by Railway; ADR= European Agreement concerning the International Carriage of Dangerous Goods by Road. TWA= Time Weighted Average. STEL= Short term exposure limit. WEL = Workplace Exposure Limit. MSDS_FR / EN 8/8