

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## redivivo (lycopene) 10% CWS/S-TG

5003792

Version 2.2

Revision Date 14.05.2012

Print Date 30.06.2014

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

#### 1.1 Product identifier

Trade name : redivivo (lycopene) 10% CWS/S-TG

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

Use of the Substance/Mixture : For the fortification of foods, Colouring agent for food and pharmaceutical products, Ingredient/additive for dietary supplements

#### 1.3 Details of the supplier of the safety data sheet

Company : DSM Nutritional Products (UK) Ltd.  
Heanor Gate  
αGB061EI0017  
Delves Road  
GB-DE75 7SG Heanor

Telephone : +441773536500  
Telefax : +441773536600  
E-mail address : sds.nutritionalproducts@dsm.com  
Responsible/issuing person

#### 1.4 Emergency telephone number

+441773536623 / +41628662314

### 2. Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

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

Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC.

#### 2.2 Label elements

##### Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

##### Additional Labelling:

EUH210 Safety data sheet available on request.

EUH208 Contains: dl-α-tocopherol: May produce an allergic reaction.

#### 2.3 Other hazards

Risk of dust explosion.

### 3. Composition/information on ingredients

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

#### 3.2 Mixtures

##### Hazardous components

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Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
$\psi$ , $\psi$ -carotene	502-65-8 207-949-1	R53	Aquatic Chronic 4; H413	$\geq 10 - < 15$
3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-ol (dl- $\alpha$ -tocopherol)	10191-41-0 233-466-0	R43 R53	Skin Sens. 1; H317 Aquatic Chronic 4; H413	$\geq 1 - < 5$

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.

**Further ingredients**

Chemical Name	CAS-No. EC-No. Registration number	Classification	GHS Classification	Concentration [%]
Starch	9005-25-8 232-679-6			$\geq 10 - \leq 30$

**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 in case of accidental inhalation of dust or fumes from overheating or combustion.  
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.  
If symptoms persist, call a physician.
- 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 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 immediate medical attention and special treatment needed**

- Treatment : Treat symptomatically.

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## 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 for firefighters : In the event of fire, wear self-contained breathing apparatus.  
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.

## 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 materials 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.

## 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.  
No special handling advice required.  
Smoking, eating and drinking should be prohibited in the application area.

Advice on protection against fire and explosion : Avoid dust formation.  
Provide appropriate exhaust ventilation at places where dust

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is formed.

Take precautionary measures against static discharges.

**7.2 Conditions for safe storage, including any incompatibilities**

Requirements for storage areas and containers : Protect against light.  
Protect from humidity.

: Keep container tightly closed and dry.

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

Storage temperature : &lt; 15 °C

**7.3 Specific end uses**

Specific use(s) : not applicable

**8. Exposure controls/personal protection****8.1 Control parameters**

Components	CAS-No.	Value (Form of exposure)	Control parameters	Update	Basis
starch	9005-25-8	TWA (Inhalable)	10 mg/m <sup>3</sup>	2005-04-06	GB EH40
		TWA (Respirable)	4 mg/m <sup>3</sup>	2005-04-06	GB EH40
	:	The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg/m <sup>3</sup> 8-hour TWA of inhalable dust or 4 mg/m <sup>3</sup> 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Advice on control is given in EH44 and in the great majority of workplaces reasonable control measures will normally keep exposure below these levels. However some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit.			
psi,psi-carotene	502-65-8	TWA	1 mg/m <sup>3</sup>		DSM Internal Limit

**8.2 Exposure controls****Personal protective equipment**

Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.  
No personal respiratory protective equipment normally required.

Hand protection : Consider the hazard characteristics of this product and any special workplace conditions when selecting the appropriate type of protective gloves.

Eye protection : Safety glasses with side-shields

Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.  
Wash hands before breaks and at the end of workday.

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## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance	: free flowing particles
Colour	: violet - brown
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 supporting combustion according to the transport regulations.
Vapour pressure	: not applicable
Relative vapour density	: not applicable
Density	: not determined
Water solubility	: dispersible
Partition coefficient: n-octanol/water	: not applicable
Autoignition temperature	: no data available
Thermal decomposition	: Decomposes on heating. Potential for exothermic hazard
Explosive properties	: no data available
Oxidizing properties	: no data available

### 9.2 Other information

Combustibility index for deposited dust	: 3 ( 23 °C) : 4 ( 100 °C)
Dust explosion class	: St(H)1 (Milled sample, Median value of the tested sample 0,065 mm, Loss on drying 5,5 %)
Minimum ignition energy	: 10 - 30 mJ (Milled sample, Median value of the tested sample 0,065 mm, Loss on drying 5,5 %, 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. 1E+11 Ohmm (Product sample, Median value of the tested sample 0,332 mm, Loss on drying 5,8 %) The material can accumulate static charge and can therefore

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cause electrical ignition.

Minimum ignition temperature of a dust/air mix : 340 °C (Median value of the tested sample 0,065 mm) determined in the BAM oven

### 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

#### 10.6 Hazardous decomposition products

No decomposition if used as directed.

### 11. Toxicological information

#### 11.1 Information on toxicological effects

Acute oral toxicity : LD50 (rat): > 2 000 mg/kg  
(calculated from LD50 of components)

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.

Respiratory or skin sensitization : Does not cause skin sensitization. (mouse, Local Lymph Node Assay (LLNA), OECD Test Guideline 429)  
Tested with a similar product containing 5% dl-alpha-tocopherol.

Genotoxicity in vivo  
ψ,ψ-carotene : not genotoxic (Various test systems)

Carcinogenicity  
ψ,ψ-carotene : (rat )  
Animal testing did not show any carcinogenic effects.

Reproductive toxicity

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- $\psi,\psi$ -carotene : No indication for adverse effects on fertility known.  
(rat, females, OECD Test Guideline 416)
- Teratogenicity  
 $\psi,\psi$ -carotene : not teratogenic  
not embryotoxic  
NOAEL: 500 mg/kg bw/d (rat, OECD Test Guideline 416)
- STOT - repeated exposure  
 $\psi,\psi$ -carotene : NOAEL (Oral, rat) : 250 mg/kg bw/d  
Chronic toxicity study (1 year)
- NOAEL (Oral, rat) : 50 mg/kg bw/d  
Chronic toxicity study (2 years)
- Further information : Dust contact with the eyes can lead to mechanical irritation.
- Experience with human exposure: Skin contact  
 $\psi,\psi$ -carotene : May cause skin discolorations.

## 12. Ecological information

### 12.1 Toxicity

No data is available on the product itself.

### 12.2 Persistence and degradability

- Biodegradability  
 $\psi,\psi$ -carotene : Not readily biodegradable.  
Test performed using a similar product.
- 3,4-dihydro-2,5,7,8-  
tetramethyl-2-(4,8,12-  
trimethyltridecyl)-2H-  
benzopyran-6-ol : Not readily biodegradable.  
8 % (28 d)  
(OECD Test Guideline 301F)

No data is available on the product itself.

### 12.3 Bioaccumulative potential

- Bioaccumulation : no data available  
Partition coefficient: n-  
octanol/water : not applicable

### 12.4 Mobility in soil

- Distribution among  
environmental compartments : no data available

### 12.5 Results of PBT and vPvB assessment

- Assessment : This mixture contains no substance considered to be  
persistent, bioaccumulating nor toxic (PBT).  
: This mixture contains no substance considered to be very  
persistent nor very bioaccumulating (vPvB).

### 12.6 Other adverse effects

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

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## 13. Disposal considerations

### 13.1 Waste treatment methods

- Product : Do not contaminate ponds, waterways or ditches with chemical or used container.  
Do not dispose of waste into sewer.  
Offer surplus and non-recyclable solutions to a licensed disposal company.
- Contaminated packaging : Dispose of as unused product.  
Do not re-use empty containers.  
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

**IATA**

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

**RID**

Not dangerous goods

**IMDG**

Not dangerous goods



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### IATA

Not dangerous goods

### 14.5 Environmental hazards

#### ADR

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

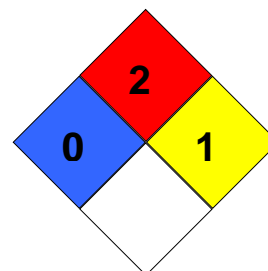
no data available

## 15. Regulatory information

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

#### NFPA Classification

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



### 15.2 Chemical Safety Assessment

not applicable

## 16. Other information

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

R43 May cause sensitization by skin contact.  
R53 May cause long-term adverse effects in the aquatic environment.

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

H317 May cause an allergic skin reaction.  
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-

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Effect Concentration. NFPA= National Fire Protection Association (USA). IATA= International Air 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.