

**β-Carotene 30% FS****0427233**

Version 3.0

Revision Date 21.10.2021

Date of last issue: 11.07.2018

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Trade name : β-Carotene 30% FS

REACH Registration Number : 01-2119967394-26-0000 (β,β-carotene)

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

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

**1.3 Details of the supplier of the safety data sheet**Company : DSM Nutritional Products Ltd.  
PO Box 2676  
CH-4002 BaselTelephone : +41618158888  
E-mail address of person responsible for the SDS : 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 :



Signal word : Warning

Hazard statements : H319 Causes serious eye irritation.

Precautionary statements : **Prevention:**  
P264 Wash skin thoroughly after handling.  
P280 Wear eye protection/ face protection.

**Response:**  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.

**Additional Labelling:**

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

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**2.3 Other hazards**

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.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

None known.

**SECTION 3: Composition/information on ingredients**

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

**3.2 Mixtures****Hazardous components**

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
β,β-carotene	7235-40-7 230-636-6 01-2119967394-26	Eye Irrit. 2; H319	>= 30 - < 50
3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-ol (dl-α-tocopherol)	10191-41-0 233-466-0 01-2120086658-39	Skin Sens. 1B; H317	>= 0.1 - < 1

**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 : Rinse mouth with water.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.

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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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**SECTION 5: Firefighting measures****5.1 Extinguishing media**Suitable extinguishing media : Alcohol-resistant foam  
Dry chemical  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : High volume water jet

**5.2 Special hazards arising from the substance or mixture**

Specific hazards during fire-fighting : None known.

**5.3 Advice for firefighters**

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

Further information : Standard procedure for chemical fires.

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**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**Personal precautions : Use personal protective equipment.  
Ensure adequate ventilation.**6.2 Environmental precautions**

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

**6.3 Methods and material for containment and cleaning up**Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Keep in suitable, closed containers for disposal.**6.4 Reference to other sections**

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

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**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 ap-

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plication area.

Advice on protection against fire and explosion : Take necessary action to avoid static electricity discharge. Product will burn under fire conditions.

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

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

Requirements for storage areas and containers : To maintain product quality, do not store in heat or direct sunlight.

Keep container tightly closed and dry.

**7.3 Specific end use(s)**

Specific use(s) : Not applicable

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
β,β-carotene	7235-40-7	TWA	0.6 mg/m <sup>3</sup>	DSM Internal Limit
3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-ol	10191-41-0	TWA	7.3 mg/m <sup>3</sup>	DSM Internal Limit

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

Eye protection : Safety glasses with side-shields

Hand protection : Consider the hazard characteristics of this product and any special workplace conditions when selecting the appropriate type of protective gloves.  
Glove material: for example nitrile rubber

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

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

Appearance : viscous, oily liquid

Colour : brownish - red

Odour : No information available.

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Odour Threshold	: No information available.
pH	: No data available
Melting point/range	: not determined
Boiling point/boiling range	: not determined
Flash point	: ca. 155 °C (DIN 51758)
Evaporation rate	: not determined
Lower explosion limit	: not determined
Upper explosion limit	: not determined
Vapour pressure	: < 0.001 hPa (20 °C)
Relative vapour density	: Not applicable
Density	: 0.94 g/cm <sup>3</sup> (20 °C)
Water solubility	: practically insoluble
Solubility in other solvents	: Oils and fats: (ca. 45 °C) slightly soluble
Partition coefficient: n-octanol/water	: Not applicable
Auto-ignition temperature	: No data available
Ignition temperature	: not determined
Thermal decomposition	: Not relevant
Viscosity, dynamic	: ≤ 1,000 mPa.s (25 °C)
Explosive properties	: Not explosive
Oxidizing properties	: No data available

**9.2 Other information**

No data available

**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**

Possible incompatibility with materials listed under section 10.5.

**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.

**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

Acute oral toxicity	: Acute toxicity estimate : > 5,000 mg/kg (Calculation method)
Skin irritation	: May cause skin irritation and/or dermatitis.
Eye irritation β,β-carotene	: Eye irritation (In vitro study, OECD Test Guideline 492)
3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-ol	: slight irritation (Rabbit, Draize Test) temporary redness
Sensitisation	: Did not cause sensitization. (Mouse, Local Lymph Node Assay (LLNA), OECD Test Guideline 429) Tested with a similar product containing 1.5% dl-alpha-tocopherol.
Genotoxicity in vitro	: No indication for mutagenicity known.
Carcinogenicity	: No indication for carcinogenicity known.
Reproductive toxicity	: No indication for adverse effects on fertility known.
Teratogenicity	: not teratogenic not embryotoxic (several species, Active ingredient)
STOT - single exposure (Acute exposure)	: The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT - repeated exposure	: NOAEL (feed admix, Dog) : 250 mg/kg bw/d Test substance: Active ingredient Chronic toxicity study (2 years)
Aspiration toxicity	: No aspiration toxicity classification

**11.2 Information on other hazards****Endocrine disrupting properties****Product:**

Assessment	: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
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**Further information****Product:**

Remarks : May cause skin discolorations.

Remarks : May cause irritation of respiratory tract.

**SECTION 12: Ecological information****12.1 Toxicity**

No data is available on the product itself.

**12.2 Persistence and degradability**

Biodegradability : Expected to be biodegradable

**12.3 Bioaccumulative potential**

Bioaccumulation : No data available

Partition coefficient: n-  
octanol/water : Not applicable**12.4 Mobility in soil**Distribution among environ-  
mental compartments : No data available**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 Endocrine disrupting properties**

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**12.7 Other adverse effects****Product:**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 chemical or used container.  
Do not dispose of waste into sewer.  
Offer surplus and non-recyclable solutions to a licensed disposal company.

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Contaminated packaging : Dispose of as unused product.  
Do not re-use empty containers.

**SECTION 14: Transport information****14.1 UN number or ID 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

**14.6 Special precautions for user**

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

**14.7 Maritime transport in bulk according to IMO instruments**

Not applicable for product as supplied.

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Conditions of restriction for the following entries should be considered:  
Number on list 3

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. Not applicable

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)  
Not applicable

**15.2 Chemical safety assessment**

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

**SECTION 16: Other information****Full text of H-Statements**

H317 : May cause an allergic skin reaction.  
H319 : Causes serious eye irritation.

**Full text of other abbreviations**

Eye Irrit. : Eye irritation



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Skin Sens. : Skin sensitisation

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; AIIIC - Australian Inventory of Industrial Chemicals; 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 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; SVHC - Substance of Very High Concern; 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

DNEL - Derived No-Effect Level; NFPA - National Fire Protection Association (USA); PNEC - Predicted No-Effect Concentration; STEL - Short term exposure limit; TLV-C - Ceiling Limit Value; TWA - Time Weighted Average; WEL - Workplace Exposure Limit.

**Further information****Classification of the mixture:**

Eye Irrit. 2

H319

**Classification procedure:**

Calculation method

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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