

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

### 1.1 Product identifier

Trade name : Vitamin A Acetate 1.5 MIU/g

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

Use of the Sub-  
stance/Mixture : Ingredient for pharmaceutical products, For the fortification of  
foods, Ingredient for personal care products

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

Company : DSM Nutritional Products Europe Ltd  
PO Box 2676  
4002 Basel

Telephone : +41618157777  
Telefax : +41618157770  
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)

Skin irritation, Category 2	H315: Causes skin irritation.
Reproductive toxicity, Category 1B	H360D: May damage the unborn child.
Chronic aquatic toxicity, Category 4	H413: May cause long lasting harmful effects to aquatic life.

### 2.2 Label elements

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

Hazard pictograms :  

Signal word : Danger

Hazard statements : H315 Causes skin irritation.  
H360D May damage the unborn child.  
H413 May cause long lasting harmful effects to aquatic life.

Precautionary statements : **Prevention:**  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
**Response:**  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.

**Disposal:**

P501

Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

127-47-9 retinyl acetate

**Additional Labelling:**

EUH208 Contains dl- $\alpha$ -tocopherol. May produce an allergic reaction.

**Other hazards**

Women of childbearing age must avoid any overexposure.

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

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

**3.1 Substances**

Not applicable

**3.2 Mixtures**

**Hazardous components**

Chemical name	CAS-No. EC-No. Registration number	Classification	Concentration (% w/w)
retinyl acetate	127-47-9 204-844-2	Skin Irrit. 2; H315 Repr. 1B; H360D Aquatic Chronic 4; H413	$\geq 50 - < 70$
3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-ol	10191-41-0 233-466-0	Skin Sens. 1B; H317 Aquatic Chronic 4; H413	$\geq 1 - < 2.5$

For explanation of abbreviations see section 16.

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**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.  
After any accidental exposure women should seek medical advice from a physician.

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 : Acute overdose produces the following symptoms:  
Headache, Irritability, Tiredness, Drowsiness, Nausea, Vomiting, Signs of increased intracranial pressure, Generalized desquamation of the skin (after ca. 24 hours)

#### 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 : 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.

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### SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas.  
Use personal protective equipment.  
Ensure adequate ventilation.

#### 6.2 Environmental precautions

Do not flush into surface water or sanitary sewer system.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.

#### 6.3 Methods and material for containment and 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.

### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

- Advice on safe handling : Avoid exposure - obtain special instructions before use.  
For personal protection see section 8.  
Dispose of rinse water in accordance with local and national regulations.  
Smoking, eating and drinking should be prohibited in the application area.
- Advice on protection against fire and explosion : Take necessary action to avoid static electricity discharge.  
Product will burn under fire conditions.
- Hygiene measures : When using do not eat or drink. When using do not smoke.  
Avoid contact with skin, eyes and clothing.

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

- Requirements for storage areas and containers : Protect against light.  
Keep under inert gas.
- Keep container tightly closed and dry.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
- Recommended storage temperature : < 15 °C

#### 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
retinyl acetate	127-47-9	TWA	0.23 mg/m <sup>3</sup>	DSM Internal Limit
	established for men			
		TWA	0.06 mg/m <sup>3</sup>	DSM Internal Limit
	established for women			

#### 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 concen-

tration of the dangerous substance at the work place.

Respiratory protection : In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.

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

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance	: oily liquid
Colour	: yellow - brownish
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	: 209 °C (Cleveland open cup)
Evaporation rate	: not determined
Lower explosion limit	: not determined
Upper explosion limit	: not determined
Vapour pressure	: not determined
Relative vapour density	: Not applicable
Density	: 0.947 g/cm <sup>3</sup> (at 20 °C)
Water solubility	: insoluble
Partition coefficient: n-octanol/water	: Not applicable
Auto-ignition temperature	: No data available
Ignition temperature	: not determined
Thermal decomposition	: No data available
Viscosity, dynamic	: not determined
Explosive properties	: Not explosive
Oxidizing properties	: No data available

### 9.2 Other information

No data available

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## 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.

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### 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 : May irritate eyes.
- 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.
- Carcinogenicity : This information is not available.
- Genotoxicity in vitro  
retinyl acetate : not mutagenic, not genotoxic (Various test systems)
- Teratogenicity  
retinyl acetate : Teratogenic  
embryotoxic
- STOT - single exposure (Acute exposure) : The substance or mixture is not classified as specific target organ toxicant, single exposure.
- STOT - repeated exposure : This information is not available.
- Experience with human exposure  
retinyl acetate : RDA (Recommended Daily Allowance) 0.8 mg pure vitamin A  
(retinol) per day  
established for men  
RDA (Recommended Daily Allowance) ca. 0.7 mg pure vitamin A (retinol) per day  
established for women

- Experience with human exposure: Skin contact  
retinyl acetate : Skin contact may provoke the following symptoms:  
Local irritation
- Experience with human exposure: Ingestion  
retinyl acetate : Acute overdose produces the following symptoms:  
Headache, Irritability, Tiredness, Drowsiness, Nausea, Vomiting, Signs of increased intracranial pressure, Generalized desquamation of the skin (after ca. 24 hours)
- Further information : May cause irritation of respiratory tract.
- Aspiration toxicity : No aspiration toxicity classification

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## SECTION 12: Ecological information

### 12.1 Toxicity

No data is available on the product itself.

### 12.2 Persistence and degradability

- Biodegradability  
retinyl acetate : Not readily biodegradable.  
33 % (28 d)  
(OECD Test Guideline 301B)
- 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 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 information : May cause long-term adverse effects in the aquatic environment.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

- Product : Discharge into the environment must be avoided.  
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.

## 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

### 14.6 Special precautions for user

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

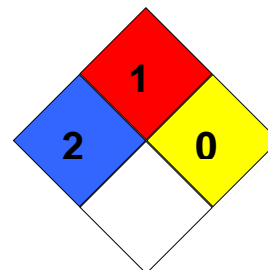
### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

## SECTION 15: Regulatory information

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

**NFPA Classification** : Health hazard: 2  
Fire Hazard: 1  
Reactivity Hazard: 0



### 15.2 Chemical safety assessment

Not applicable

## SECTION 16: Other information



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



**Vitamin A Acetate 1.5 MIU/g**

**0418846**

Version 2.2

Revision Date 11.05.2016

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## Full text of H-Statements

- H315 : Causes skin irritation.  
H317 : May cause an allergic skin reaction.  
H360D : May damage the unborn child.  
H413 : May cause long lasting harmful effects to aquatic life.

## Full text of other abbreviations

- Aquatic Chronic : Chronic aquatic toxicity  
Repr. : Reproductive toxicity  
Skin Irrit. : Skin irritation  
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; 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 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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