SAFETY DATA SHEET

# PALS VITAMIN PAK

Version 1.1 Revision Date 01/17/2022 Date of last issue: 08/12/2014

## SECTION 1. IDENTIFICATION

Product name : PALS VITAMIN PAK

**Manufacturer or supplier's details**

Company name of supplier : Zinpro Specialty Products

Address : 411 Ranch Road
Rainsville, AL 35986

Telephone : ((256) 638-9636
Telefax : (

Emergency telephone number : 1-800-424-9300 (24 HR CHEMTREC, CA & US); Outside CA & US +1-703-572-3887 (COLLECT CALLS ACCEPTED)

E-mail address of person responsible for the SDS : mcouvillion@zinpro.com

## SECTION 2. HAZARDS IDENTIFICATION

**GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

Eye irritation : Category 2A

Reproductive toxicity : Category 1B

**GHS label elements**

Hazard pictograms :

Signal word : Danger

Hazard statements : H319 Causes serious eye irritation.
H360 May damage fertility or the unborn child.

autionary statements :

**Prevention:**

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ eye protection/ face protection.
P281 Use personal protective equipment as required.

**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.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.

**Storage:**
P405 Store locked up.

**Disposal:**
P501 Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**
Risk of dust explosion.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Brief description of the product : Mixture

**Hazardous components**

| Chemical name | CAS-No. | Concentration (% w/w) |
|---|---|---|
| nicotinamide | 98-92-0 | >= 5 - < 10 |
| citric acid | 77-92-9 | >= 5 - < 10 |
| Menadione sodium bisulfite trihydrate | 6147-37-1 | >= 1 - < 5 |
| calcium pantothenate, D-form | 137-08-6 | >= 1 - < 5 |
| thiamine hydrochloride | 67-03-8 | >= 1 - < 5 |
| retinyl acetate | 127-47-9 | >= 0.1 - < 1 |

## SECTION 4. 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.

Most important symptoms and effects, both acute and delayed : None known.

## SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Water
Foam

Specific hazards during fire- : Do not allow run-off from fire fighting to enter drains or water

| | | |
|---|---|---|
| fighting | | courses. |
| Further information | : | Collect contaminated fire extinguishing water separately. This must not be discharged into drains.<br>Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.<br>Consider dust explosion hazard. |
| Special protective equipment for firefighters | : | In the event of fire, wear self-contained breathing apparatus. |

## SECTION 6. ACCIDENTAL RELEASE MEASURES

| | | |
|---|---|---|
| Personal precautions, protective equipment and emergency procedures | : | Use personal protective equipment.<br>Ensure adequate ventilation.<br>Avoid dust formation.<br>Avoid breathing dust. |
| Environmental precautions | : | Do not flush into surface water or sanitary sewer system.<br>Prevent further leakage or spillage if safe to do so.<br>If the product contaminates rivers and lakes or drains inform respective authorities. |
| Methods and materials for containment and cleaning up | : | Pick up and arrange disposal without creating dust.<br>Keep in suitable, closed containers for disposal. |

## SECTION 7. HANDLING AND STORAGE

| | | |
|---|---|---|
| Advice on protection against fire and explosion | : | Avoid dust formation.<br>Provide appropriate exhaust ventilation at places where dust is formed.<br>Take precautionary measures against static discharges. |
| Advice on safe handling | : | Avoid contact with skin and eyes.<br>For personal protection see section 8.<br>Dispose of rinse water in accordance with local and national regulations.<br>Smoking, eating and drinking should be prohibited in the application area. |
| Conditions for safe storage | : | Keep container tightly closed and dry. |

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Components with workplace control parameters**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|---|---|---|---|---|
| calcium pantothenate, D-form | 137-08-6 | TWA | 10 mg/m3 | DSM Internal Limit |
| thiamine hydrochloride | 67-03-8 | TWA | 2 mg/m3 | DSM Internal Limit |

**Personal protective equipment**

| | | |
|---|---|---|
| Respiratory protection | : | In the case of dust or aerosol formation use respirator with an approved filter. |

| | | |
|---|---|---|
| Hand protection | | |
| Material | : | for example nitrile rubber |
| Remarks | : | Glove material: for example nitrile rubber<br>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.<br>Wash hands before breaks and at the end of workday. |

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

| | | |
|---|---|---|
| Appearance | : | powder |

**Other information**

No data available

## SECTION 10. STABILITY AND REACTIVITY

| | | |
|---|---|---|
| Possibility of hazardous reactions | : | Dust may form explosive mixture in air. |
| Conditions to avoid | : | Heat |
| Incompatible materials | : | Strong acids and strong bases<br>Strong oxidizing agents |

## SECTION 11. TOXICOLOGICAL INFORMATION

| | | |
|---|---|---|
| Acute oral toxicity | : | Acute toxicity estimate : > 5,000 mg/kg<br>(Calculation method) |
| Skin irritation | : | May cause skin irritation and/or dermatitis. |
| Eye irritation | : | Dust contact with the eyes can lead to mechanical irritation. |
| Genotoxicity in vitro<br>retinyl acetate | : | not mutagenic, not genotoxic (Various test systems) |
| Carcinogenicity | | |
| IARC | | No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. |

| | |
|---|---|
| OSHA | No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens. |
| NTP | No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. |

Teratogenicity

| | |
|---|---|
| retinyl acetate | : Teratogenic<br>embryotoxic |

STOT - single exposureAcute exposure

| | |
|---|---|
| menadione sodium bisulfite, trihydrate | : May cause respiratory irritation. |

Experience with human exposure

| | |
|---|---|
| thiamine hydrochloride | : RDA (Recommended Daily Allowance) ca. 1.2 mg<br>Cases of anaphylactic shock after parenteral application of Thiamin have been recorded. |
| retinyl acetate | : RDA (Recommended Daily Allowance) 0.8 mg pure vitamin A (retinol) per day<br>established for men<br>RDA (Recommended Daily Allowance) ca. 0.7 mg pure vitamin A (retinol) per day<br>established for women |

Experience with human exposure: Skin contact

| | |
|---|---|
| menadione sodium bisulfite, trihydrate | : Skin contact may provoke the following symptoms:<br>Toxic skin damage (especially on damp skin), Skin irritation, Discoloration, Drying of the skin, Blistering |
| retinyl acetate | : Skin contact may provoke the following symptoms:<br>Local irritation |

Experience with human exposure: Ingestion

| | |
|---|---|
| retinyl acetate | : Acute overdose produces the following symptoms:<br>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. |

## SECTION 12. ECOLOGICAL INFORMATION

**Toxicity**

Toxicity to fish

| | |
|---|---|
| menadione sodium bisulfite, trihydrate | : Oncorhynchus mykiss (rainbow trout)<br>LC50 (96 h) 0.43 mg/l<br>(nominal concentration)<br>(OECD Test Guideline 203) |

Toxicity to daphnia and other aquatic invertebrates

| | | |
|---|---|---|
| menadione sodium bisulfite, trihydrate | : | Daphnia magna (Water flea)<br>EC50 (48 h) 0.73 mg/l<br>(nominal concentration)<br>(OECD Test Guideline 202) |

Toxicity to algae

| | | |
|---|---|---|
| menadione sodium bisulfite, trihydrate | : | EbC50 (72 h) 2 mg/l<br>(nominal concentration) |
| | : | NOEC (72 h) 0.4 mg/l<br>(nominal concentration) |

No data is available on the product itself.

**Persistence and degradability**

Biodegradability

| | | |
|---|---|---|
| menadione sodium bisulfite, trihydrate | : | Not readily biodegradable.<br>17 % (28 d)<br>(OECD Test Guideline 301A) |
| retinyl acetate | : | Not readily biodegradable.<br>33 % (28 d)<br>(OECD Test Guideline 301B) |

No data is available on the product itself.

**Bioaccumulative potential**

**Mobility in soil**

**Other adverse effects**

| | | |
|---|---|---|
| Regulation | | 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances |
| Remarks | | This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B). |
| Additional ecological information | : | Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |

## SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal methods**

| | | |
|---|---|---|
| Waste from residues | : | User must determine if any wastes generated exhibit hazardous characteristics as per 40 CFR Part 261 or other national / local legislation.<br><br>Discharge into the environment must be avoided.<br>Do not contaminate ponds, waterways or ditches with chemical or used container.<br>Do not dispose of waste into sewer.<br>Offer surplus and non-recyclable solutions to a licensed disposal company. |
| Contaminated packaging | : | Dispose of as unused product.<br>Do not re-use empty containers. |

## SECTION 14. TRANSPORT INFORMATION

**International Regulations**

**UNRTDG**

| | | |
|---|---|---|
| UN number | : | UN 3077 |
| Proper shipping name | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (menadione sodium bisulfite) |
| Class | : | 9 |
| Packing group | : | III |
| Labels | : | 9 |

**IATA-DGR**

| | | |
|---|---|---|
| UN/ID No. | : | UN 3077 |
| Proper shipping name | : | Environmentally hazardous substance, solid, n.o.s. (menadione sodium bisulfite) |
| Class | : | 9 |
| Packing group | : | III |
| Labels | : | Miscellaneous |
| Packing instruction (cargo aircraft) | : | 956 |
| Packing instruction (passenger aircraft) | : | 956 |
| Environmentally hazardous | : | yes |

**IMDG-Code**

| | | |
|---|---|---|
| UN number | : | UN 3077 |
| Proper shipping name | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (menadione sodium bisulfite) |
| Class | : | 9 |
| Packing group | : | III |
| Labels | : | 9 |
| EmS Code | : | F-A, S-F |
| Marine pollutant | : | yes |

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

Not applicable for product as supplied.

**National Regulations**

**49 CFR**

| | | |
|---|---|---|
| UN/ID/NA number | : | UN 3077 |
| Proper shipping name | : | Environmentally hazardous substance, solid, n.o.s. (menadione sodium bisulfite) |
| Class | : | 9 |
| Packing group | : | III |
| Labels | : | CLASS 9 |
| ERG Code | : | 171 |
| Marine pollutant | : | yes(menadione sodium bisulfite) |
| Remarks | : | No additional requirements. |

**Special precautions for user**

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

## SECTION 15. REGULATORY INFORMATION

**EPCRA - Emergency Planning and Community Right-to-Know Act**

**CERCLA Reportable Quantity**

| Components | CAS-No. | Component RQ (lbs) | Calculated product RQ (lbs) |
|---|---|---|---|
| 67-56-1 | Not Assigned | 5000 | * |

*: Calculated RQ exceeds reasonably attainable upper limit.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

| Components | CAS-No. | Component TPQ (lbs) |
|---|---|---|

**SARA 311/312 Hazards** : Acute Health Hazard
Chronic Health Hazard

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**Clean Air Act**

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

**Clean Water Act**

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.
This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

**US State Regulations**

**Massachusetts Right To Know**

No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know**

| | |
|---|---|
| sodium hydrogencarbonate | 144-55-8 |
| ascorbic acid | 50-81-7 |
| potassium chloride | 7447-40-7 |
| nicotinamide | 98-92-0 |
| 3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-yl acetate | 7695-91-2 |
| citric acid | 77-92-9 |
| polyphosphoric acids, sodium salts | 68915-31-1 |
| Lignosulfonic acid, calcium salt | 8061-52-7 |
| methanol | 67-56-1 |

**New Jersey Right To Know**

| | |
|---|---|
| sodium hydrogencarbonate | 144-55-8 |
| ascorbic acid | 50-81-7 |
| potassium chloride | 7447-40-7 |
| nicotinamide | 98-92-0 |
| 3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-yl acetate | 7695-91-2 |

**TSCA list**

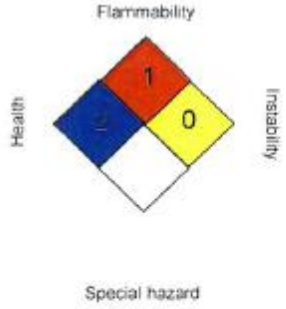
Not relevant

Not relevant

## SECTION 16. OTHER INFORMATION

**Further information**

**NFPA 704:**




**HMIS® IV:**


HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

**Full text of other abbreviations**

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; 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; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; 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; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; 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; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative
ACGIH = American Conference of Governmental Industrial Hygienists. CFR = Code of Federal Regulations. EPA = Environmental Protection Agency. NIOSH = National Institute of Occupational Safety and Health. OSHA = Occupational Safety and Health Administration. STEL = Short term exposure limit. TLV = Threshold Limit Value. TLV-C = Ceiling Limit Value. TWA = Time Weighted Average.

Revision Date : 01/17/2022

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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