



Section 1. Product and Company Identification

Product Name all-trans-Retinol / Vitamin A
Product ID R1876
Chemical Name (Synonyms) Alphasterol; Retinol; Avitol
Supplier LKT Laboratories, Inc
545 Phalen Blvd.
St. Paul, MN 55130 USA
Ph: 651-644-8424 Fax: 651-644-8357
www.lktlabs.com - getinfo@lktlabs.com

Emergency Phone # 1-800-424-9300

Section 2. Hazards Identification

GHS Classification Skin sensitization (Category 1), H317
Eye irritation (Category 2A), H319
Reproductive toxicity (Category 1B), H360
Chronic aquatic toxicity (Category 4), H413

GHS Label elements including precautionary statements

Pictogram



Signal word Danger

Hazard and precautionary statements

Hazard statements

H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H360 - May damage fertility or the unborn child.
H413 - May cause long lasting harmful effects to aquatic life.

Precautionary statements

P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P261 - Avoid breathing dust, fumes, gas, mist, vapors and spray.
P264 - Wash skin thoroughly after handling.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, eye protection and face protection.
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.
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 and/or attention.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P333 + P313 - If skin irritation or rash occurs: Get medical advice and/or attention.
P337 + P313 - If eye irritation persists: Get medical advice/ attention.
P363 - Wash contaminated clothing before reuse.
P405 - Store locked up.
P501 - Dispose of contents and/or container to an approved waste disposal plant.

HMIS Classification Health hazard: 2
Chronic health hazard: *
Flammability: 0
Physical hazard: 0

NFPA Rating Health hazard: 2
Fire hazard: 0
Reactivity hazard: 0

Potential Health Effects Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
Skin: May be harmful if absorbed through skin. Causes skin irritation. May cause an allergic skin reaction.
Eyes: Causes serious eye irritation.

Ingestion: May be harmful if swallowed.
Reproductive toxicity: May damage fertility or the unborn child.

Section 3. Composition/Information on Ingredients

Substances

Formula C₂₀H₃₀O
CAS No. 68-26-8

Formula Wt. 286.45
EC No. 200-683-7

Section 4. First Aid Measures

General advice Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Eye Contact Flush eyes with water as a precaution.

Skin Contact Wash off with soap and plenty of water. Consult a physician.

Inhalation If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Ingestion Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5 . Firefighting Measures

Flash Point Not available.

Extinguishing Media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Firefighting Procedures Wear self-contained breathing apparatus and protective clothing for fire fighting if necessary.

Unusual Fire Hazards Carbon oxides.

Section 6. Accidental Release Measures

Personal Precautions Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

Environmental Precautions Do not let product enter drains.

Methods and materials for containment and cleanup Avoid raising dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 7. Handling and Storage

Handling Avoid contact with skin and eyes. Avoid formation of dusts and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Air and moisture sensitive. Recommended storage temperature: -20°C.

Hazardous Decomposition Products Not available.

Other Remarks This product is a synthetic. It ships with blue ice.

Section 8. Exposure Controls/Personal Protection

Personal protective equipment

EXPOSURE CONTROLS

Contains no substances with occupational exposure limit values.
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

PERSONAL PROTECTION

Eye/face protection: Safety glasses with side-shields conforming to EN 166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Full and Splash contact - Material: Nitrile rubber, Minimum layer thickness: 0.11mm, Break through time: 480 min, Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M).

Body protection: Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Section 9. Physical and Chemical Properties

Physical State	Powder.	Color	Light yellow-orange powder with lumps.
Boiling Point	N/A	Volatility	Not available.
Melting Point	63-64°C.	Density	Not available.
Solubility	Soluble in alcohol, methanol, chloroform, ether, fats or oils.	pH	Not available.
Flash Point	Not available.	Ignition temperature	Not available.
Lower explosion limit	Not available.	Autoignition temperature	Not available.
Upper explosion limit	Not available.	Vapor pressure	Not available.
Water solubility	Not available.	Odor	Not available.
Partition coefficient: n-octanol/water	Not available.	Odor Threshold	Not available.
Relative vapor density	Not available.	Evaporation rate	Not available.

Section 10. Stability and Reactivity

Stability	Stable under recommended storage conditions. This product is a synthetic.
Materials To Avoid	Oxidizing agents.
Hazardous Decomposition Products	Not available.

Possibility of hazardous reactions Not available.

Conditions to avoid Not available.

Section 11. Toxicological Information

Oral LD50 Not available.

Skin corrosion/irritation Not available.

Inhalation LC50 Not available.

Serious eye damage/irritation Eyes - rabbit
Result: Irritating to eyes. - 24 hours
(OECD Test Guideline 405)

Dermal LD50 Not available.

Respiratory or skin sensitization In vivo assay - guinea pig
Result: May cause sensitization by skin contact.
(OECD Test Guideline 406)

Other information on acute toxicity Not available.

Germ cell mutagenicity Ames test
S. typhimurium
Result: negative

Reproductive Toxicity Not available.

Aspiration Hazard Not available.

Specific organ toxicity single exposure (GHS) Not available.

Synergistic effects Not available.

Specific organ toxicity repeated exposure (GHS) Not available.

Additional Information RTECS: VH6750000

Teratogenicity Not available.

Signs and symptoms of exposure Congenital abnormalities may occur after exposure to high concentrations during pregnancy. Hypervitaminosis A, yellow pigmentation, irritability, loss of appetite, gastrointestinal disturbance, repeated exposure may cause skin dryness or cracking. Acute vitamin A intoxication may occur with exposure to high concentrations, sedation, headache, and exfoliative lesions.

Potential Health Effects Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
Skin: May be harmful if absorbed through skin. Causes skin irritation. May cause an allergic skin reaction.
Eyes: Causes serious eye irritation.
Ingestion: May be harmful if swallowed.
Reproductive toxicity: May damage fertility or the unborn child.

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.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH
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.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Section 12. Ecological Information

Toxicity Toxicity to fish: static test LC50-Leuciscus idus (Golden orfe)->10,000mg/l - 96h (DIN 38412).

Mobility in soil Not available.

PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not

conducted.

Persistence and degradability Not available.

Other adverse effects Not available.

Bioaccumulative potential Not available.

Section 13. Disposal Considerations

Waste Disposal Dispose of material according to all federal, state and local regulations.
Offer material to a licensed, professional waste disposal company to dispose of as unused product.

Section 14. Transport Information

DOT (US) Not dangerous goods.

IATA Not dangerous goods.

IMDG Not dangerous goods.

Further Information

Section 15. Regulatory Information

Reach No.

SARA 302 Components No chemicals in this material are subject of the reporting requirements of SARA Title III, Section 302.

SARA 313 Components 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.

SARA 311/312 Components Acute health hazard and chronic health hazard.

Massachusetts Right To Know Components No components are subject to the Massachusetts Right of Know Act.

Pennsylvania Right To Know Components all-trans-Retinol CAS #: 68-26-8 Revision Date: 1993-04-24

New Jersey Right To Know Components all-trans-Retinol CAS #: 68-26-8 Revision Date: 1993-04-24

California Prop 65 Components WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
all-trans-Retinol CAS No. 68-26-8 Revision Date: 2007-09-28

Section 16. Other Information

Other information The information in this document is believed to be correct but is not necessarily complete. LKT does not guarantee the accuracy of the information. The burden of verifying the information in this document rests solely upon the user.

Updated 4/19/2019

For emergencies in the USA, call
CHEMTREC 800-424-9300