

TITANIUM DIOXIDE, MICRONIZED

1. IDENTIFICATION

Product Name: Titanium Dioxide, Micronized
INCI Name: Titanium dioxide, aluminum hydroxide, lauric acid
CAS#: 13463-67-7, 1333-84-2, 143-07-7
Product Form: Powder
Product Use: Cosmetic use
Supplier of MSDS: Avena Lab, Farmadria d.o.o.
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2. HAZARD(S) IDENTIFICATION

GHS Classification: Skin irritation (category 3), carcinogenicity (category 2)
GHS Signal Word: DANGER
GHS Hazard Pictograms:



GHS Hazard Statements: H319: Causes serious eye irritation
H335: May cause respiratory irritation
H372: Causes damage to organs through prolonged or repeated exposure

GHS Precautionary Statements: P281: Use personal protective equipment as required

Potential Health Hazards: Eyes: Causes eye irritation.
Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.
Skin: May be harmful if absorbed through skin. Causes skin irritation.
Ingestion: May be harmful if swallowed.

NFPA Ratings (704):

Health	1
Flammability	0
Reactivity	0
Specific Hazard	n/a

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS number	Weight %	Molecular Weight
Titanium Dioxide	68411-27-8	78-84%	79.87 g/mol
Aluminum Hydroxide	1333-84-2	Proprietary	78.01 g/mol
Lauric Acid	143-07-7	Proprietary	200.32 g/mol

4. FIRST-AID MEASURES

Eyes:	In case of eye contact, rinse with plenty of water and seek medical attention if necessary
Inhalation:	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if necessary.
Skin:	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention if necessary
Ingestion:	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention if necessary.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:	Water spray, fog, CO2, dry chemical, or alcohol resistant foam.
Unsuitable extinguishing media:	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards arising from the chemical:	Fire may produce irritating, corrosive and/or toxic gases.
Special protective equipment and precautions for firefighters:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection. Wear self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode when fighting fires.
Fire fighting instructions:	In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Water runoff can cause environmental damage. Ventilate closed spaces before entering them. Keep run-off water out of sewers and water sources. Dike for water control.
Specific methods:	Use water spray to cool unopened containers.
General fire hazards:	Static charges generated by emptying package in or near flammable vapor may cause flash fire.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:
 (Methods and materials for containment and cleaning up)

Eliminate all sources of ignition. Avoid contact with skin or inhalation of spillage, dust or vapor. Keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Collect and dispose of spillage as indicated in section 13 of the SDS. Absorb with inert absorbent such as dry clay, sand or diatomaceous earth, commercial sorbents, or recover using pumps. The product is immiscible with water and will spread on the water surface. Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Never return spills in original containers for re-use. This material and its container must be disposed of as hazardous waste. Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Prevent product from entering drains. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Environmental precautions:

Retain and dispose of contaminated wash water. Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so.

7. HANDLING AND STORAGE

Precautions for safe handling:

Do not handle or store near an open flame, heat or other sources of ignition. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Avoid breathing vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities:

Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Component	Exposure Limits	Basis	Entity
Titanium Dioxide	10 mg/m ³	TLV	ACGIH
	15 mg/m ³ (total dust)	PEL	OSHA

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TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

Individual protection measures, such as personal protective equipment

Eye/face protection: Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection:

Chemical resistant gloves.

Other:

Wear suitable protective clothing.

Respiratory protection:

Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.

Thermal hazards:

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations:

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance, Physical State:

Powdered solid

Odor:

Odorless

Density:

4 g/cm³ at 20°C (68°F)

Color:

White

Molecular Weight:

Not available

pH

6.5 at 111g/l at 20°C

Solubility:

Soluble in alkali and hot

Boiling Point:

Not available sulphuric acid

Vapor Pressure:

Not available

Vapor Density:

Not available

Evaporation Rate:

Not available

Melting Point:

>1,800°C (3,272°F)

Flash Point:

Not flammable

10. STABILITY AND REACTIVITY

Reactivity:	Product is stable
Chemical Stability:	Product is stable
Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	Not available
Incompatible Materials:	Reactive with acids, slightly reactive with metals
Hazardous Decomposition Products:	Titanium oxides
Special Remarks:	Reaction of titanium dioxide and lithium occurs at around 200°C with a flash of light. The temperature can reach 900°C. A violent or incandescent reaction with metals (aluminum, calcium, magnesium, potassium, sodium, zinc, and lithium) may occur at high temperatures. Polymerization and corrosion will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:	Not classified
Skin:	LD50 Dermal (rabbit) > 10,000 mg/kg
Eyes:	Causes irritation, redness, watering eyes
Respiratory:	Causes irritation, coughing, wheezing
Ingestion:	LD50 Oral (rat) > 10,000 mg/kg, causes irritation, nausea, vomiting, diarrhea
Carcinogenicity:	IARC: 3-Group 3: Not classifiable for human (Titanium dioxide) ACGIH: Not classifiable for human or animal (Titanium dioxide) NTP: No components 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 components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen
Teratogenicity:	Not available
Germ Cell Mutagenicity:	Mutagenetic for somatic cells
Embryotoxicity:	Not available
Specific Target Organ Toxicity:	May cause damage to lungs and upper respiratory tract
Reproductive Toxicity:	Not available
Respiratory/Skin Sensitization:	Not available

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Aquatic Vertebrate:

LC50 - other fish - > 1,000 mg/l - 96 h

Aquatic Invertebrate:

EC0 -Daphnia magna (Water flea) -1,000 mg/l - 48 h

Persistence and Degradability:

Not available

Bioaccumulative Potential:

Not available

Mobility in Soil:

Not available

PBT and vPvB Assessment:

Not available

Other Adverse Effects:

Not available

13. DISPOSAL CONSIDERATIONS

Disposal instructions:

Do not discharge into drains, water courses or onto the ground. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations:

Dispose in accordance with all applicable regulations.

Hazardous waste code:

Not established.

Waste from residues / unused products:

Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

Transport	Transport	Hazard class	Packing group	UN number
Land	RID/ADR	Not Regulated	Not Regulated	Not Regulated
Maritime	IMDG			
Air	IATA/DGR			

15. REGULATORY INFORMATION

TSCA Inventory Status:	All ingredients are listed on the TSCA inventory
DSCL (EEC):	All ingredients are listed on the TSCA inventory
California Proposition 65:	Not listed
SARA 302:	Not listed
SARA 304:	Not listed
SARA 311:	Listed: Titanium Dioxide
SARA 312:	Listed: Titanium Dioxide
SARA 313:	Not listed

16. OTHER INFORMATION

Disclaimer: Avena Lab, Farmadria d.o.o. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The above information relates only to this product and not to its use in combination with any other material or any particular process and is designed only as guidance for the safe handling, use, processing, storage, transportation, and disposal and should not be considered as a guarantee or quality specification. It is the sole responsibility of the individual(s) purchasing this product to assess its' safety in the final application. The above information is based on data provided by and collected from recognized sources such as distributors, manufacturers, and technical groups and is considered to be accurate to the best of our knowledge. Appropriate warnings and safe handling procedures should be provided to all handlers and users, taking into account the intended use and the specific conditions and factors relating to such use in accordance with all applicable laws and regulations.