



Vision Miner NanoPolymer Adhesive

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

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

1.1. Product identifier

Product name : Vision Miner NanoPolymer Adhesive
Formula : n/a

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

Use of the substance/mixture : 3D printing adhesive
Use advised against : None identified

1.3. Details of the supplier of the safety data sheet

Vision Miner, LLC
3183 Airway Ave. Suite E
Costa Mesa, CA 92626

1.4. Emergency telephone number

Emergency number : 1 833-774-6863
10 am- 6 pm (PST) MON - FRI

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Flammable Liquid, Category 2
Eye Damage/Irritation, Category 2B
Specific Target Organ Toxicity (Single Exposure), Category 3

2.2. Label elements

Labelling

Hazard pictograms :  

Signal word : Danger

Hazard statements : Highly flammable liquid and vapor
Causes serious eye irritation
May cause drowsiness or dizziness

Precautionary statements : Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.
Ground and bond container and receiving equipment.
Use explosion proof electrical equipment.
Use non-sparking tools.
Take action to prevent static discharges.
Avoid breathing mist/vapors/spray.
Wash hands thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/eye protection.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Call a POISON CENTER/doctor if you feel unwell.
If eye irritation persists: Get medical advice/attention.
In case of fire: Use water spray, foam, dry powder or CO₂ to extinguish.
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.

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Dispose of this material and its container to hazardous or special waste collection point.

2.3. Other hazards

Other hazards which do not result in classification : Prolonged exposure may cause damage to the central nervous system. Can cause upper respiratory tract irritaion.

2.4. Unknown acute toxicity

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixture

Name	Product identifier (CAS No.)	% w/w
2-Propanol	67-63-0	> 50

The specific chemical component identities and/or the exact component percentages of this material may be withheld as trade secrets.

This information is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of 29 CFR 1910.1200 (I)(1).

Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, mutagen, and reproductive toxicant, respiratory tract and skin sensitizers in addition to oral/ inhalation acute toxicant in category 1 and 2). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. f not breathing, give artificial respiration. Consult a physician.

First-aid measures after skin contact : Wash skin with plenty of water and soap. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: get medical advice/attention.

First-aid measures after ingestion : If swallowed, rinse mouth with water (only if the person is conscious). Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Obtain emergency medical attention. Call a POISON CENTER or doctor/physician

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after eye contact : Causes serious eye irritation. Symptoms include stinging, watering, redness, and swelling.

Additional information : May cause damage to central nervous system, depression. Prolonged or repeated exposure can cause: Nausea, Headache, Vomiting, narcosis, Drowsiness, Overexposure may cause mild, reversible liver effects., Aspiration may lead to:, Lung oedema, Pneumonia

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Can cause damage to Kidney - Irregularities - Based on Human Evidence Kidney - Irregularities - Based on Human Evidence

4.3. Indication of any immediate medical attention and special treatment needed

Call a POISON CENTER/doctor if you feel unwell. Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Water jet spray. Water or foam may cause frothing of materials heated above 212°F / 100°C.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid and vapour.

Explosion hazard : May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protective equipment for firefighters : Do not enter fire area without proper protective equipment, including respiratory protection.

Other information : Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking. Ensure adequate ventilation. Avoid contact with eyes. Avoid breathing mist. Danger of slipping by leaking/spilling product. Equip cleanup crew with proper protection. Evacuate unnecessary personnel. The low volatility of this product does not require ventilation. However, depending on the condition, adequate ventilation might be required.

6.2. Environmental precautions

Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a container for disposal. Containers must not be punctured or destroyed by burning, even when empty. Ensure all national/local regulations are observed.

6.4. Reference to other sections

See Also Section 8, 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.

Precautions for safe handling : Wash hands thoroughly after handling. Avoid breathing mist/vapors/spray. Use only outdoors or in a well-ventilated area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Use explosion proof electrical equipment. Use non-sparking tools. Take action to prevent static discharges. Wear protective gloves/eye protection.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/... equipment.

Storage conditions : Store in a well-ventilated place. Keep container tightly closed. Store locked up. Keep cool. Keep only in the original container in a cool well-ventilated place. Keep container closed when not in use. Keep away from incompatible materials. Keep away from sources of heat.

Incompatible materials : Oxidizing agents. Bleaching agent. Strong acids. Aluminium. Halogenated compounds.

Incompatible condition : Direct sunlight. Heat sources. Open flames. Sparks

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits						
SUBSTANCE.	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m ³)	STEL (ppm)	STEL (mg/m ³)	Note:
Isopropyl alcohol	67-63-0	400	980			OSHA PEL Z-1
Isopropyl alcohol	67-63-0	400	980	500	1225	OSHA PEL
Isopropyl alcohol	67-63-0	400		500		NIOSH REL Z-1
2-Propanol (Isopropanol; Isopropyl alcohol)	67-63-0	200		400		ACGIH TLV, A4

Remark	Notes
OSHA PEL Z-1	Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) from 29 CFR 1910.1000 Z-1 Table
OSHA PEL	Occupational Safety and Health (OSHA) Permissible Exposure Limits (PELs).
NIOSH REL Z-1	National Institute for Occupational Safety and Health (NIOSH) Recommended Exposure Limits (RELs) from the NIOSH Pocket Guide to Chemical Hazards table Z-1: Up to 10-hour time weighted average (TWA) during a 40-hour work week
ACGIH TLV A4	The American Conference of Governmental Industrial Hygienists (ACGIH®) Threshold Limit Values (TLVs®) 2020 Not Classifiable as a Human Carcinogen

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BEI: Biological Exposure Indices (ACGIH)						
Substances	CAS Number	Sampling	Tissues	Control parameters	Biological monitoring guidance value	Comments
2-Propanol	67-63-0	End of shift at end of workweek	urine	Acetone	40 mg/L	B, Ns

Remark	Notes
B	Background
b	After exposure to soluble compounds
Ns	Nonspecific

8.2 Exposure controls

8.2.1. Appropriate engineering controls Use non-sparking ventilation systems, approved explosion-proof equipment, and intrinsically safe electrical systems. Use with ventilation, local exhaust ventilation or breathing protection.

8.2.2. Personal protection equipment



Eye Protection Wear goggles if splashing or spraying is anticipated.



Skin protection In case of repeated or prolonged contact wear gloves. In case of repeated or prolonged exposure : Personal protective clothing should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling.



Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.



Thermal hazards None known.

8.2.3. Environmental Exposure Controls Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Translucent viscous liquid
Color	: Colorless
Odor	: Alcohol-like
Odor threshold	: No data available
pH	: Not applicable
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: ca 180 °F (82 °C) Estimated
Flash point	: ca 54 °F (12 °C) – Closed cup
Auto-ignition temperature	: ca 800 °F (430 °C) Estimated
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapor pressure	: 43hPa (at 68 °F)
Relative vapor density at 20 °C	: No data available
Relative density	: No data available

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Solubility	: No data available
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with air to form peroxides.

10.2. Chemical stability

The product is stable at normal handling and storage condition

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur. Vapours may form explosive mixture with air.

10.4. Conditions to avoid

Vapors may form an explosive mixture with air.

10.5. Incompatible materials

Oxidizing agents. Bleaching agent. Strong acids. Aluminium. Halogenated compounds.

10.6. Hazardous decomposition products

Thermal decomposition products: Carbon monoxide. Carbon dioxide. Low molecular weights hydrocarbons.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified
(Based on available data, the classification criteria are not met)

2-Propanol (67-63-0)	
LD50 oral rat	5,045 mg/kg
LC50 dermal rabbit	12,800 mg/kg
LC50 inhalation rat (mg/l/4h)	37.5 mg/l – 4h

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Calculation method : Causes eye irritation.

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified
(Based on available data, the classification criteria are not met)

Carcinogenicity : Not classified
(This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification at concentration $\geq 0.1\text{wt}\%$)

2-Propanol (67-63-0)	
ACGIH	A4 - Not Classified as a Human Carcinogen
IARC	Group 3 – Not Classified as Carcinogen

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Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
Specific target organ toxicity (single exposure)	: Calculation method : May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure)	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
Symptoms/injuries after short-term or long term exposure	: May cause damage to central nervous system, depression. Prolonged or repeated exposure can cause: Nausea, Headache, Vomiting, narcosis, Drowsiness, Overexposure may cause mild, reversible liver effects., Aspiration may lead to:, Lung oedema, Pneumonia To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Can cause damage to Kidney - Irregularities - Based on Human Evidence Kidney - Irregularities - Based on Human Evidence.

SECTION 12: Ecological information

12.1. Toxicity

Toxicity - Aquatic invertebrates	Low toxicity to invertebrates.
Toxicity - Fish	Low toxicity to fish.
Toxicity - Algae	Low toxicity to algae.
Toxicity - Sediment Compartment	Not classified.
Toxicity - Terrestrial Compartment	Not classified.

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on ozone layer	: No additional information available
Effect on the global warming	: No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations	: Dispose of this material and its container to hazardous or special waste collection point. Recycle only completely emptied packaging. Containers must not be punctured or destroyed by burning, even when empty. Do not allow to enter drains, sewers or watercourses. Do NOT landfill. Normal disposal is via incineration operated by an accredited disposal contractor. Send to a licensed recycler, reclaimer or incinerator. Dispose of this material and its container to hazardous or special waste collection point. Dispose at suitable refuse site.
Additional information	: Dried inactive material may be disposed of as municipal waste.

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SECTION 14: Transport information

14.1 UN number

UN No. 1993

14.2 UN proper shipping name

UN proper shipping name FLAMMABLE LIQUID, N.O.S. (Contain Isopropanol)

14.3 Transport hazard class(es)

DOT Class 3
DOT Label 3
DOT Special Provisions IB2, T7, TP1, TP8, TP28
DOT Packaging Exceptions 150
DOT Packaging Non Bulk 202
DOT Packaging Bulk 242
DOT Quantity Limitations Passenger aircraft/rail 5 L
DOT Quantity Limitations Cargo aircraft 60 L
DOT Vessel Stowage Location B

Transport by sea/Air transport

IMDG Class 3
Special Provisions 274 601 640D
Limited Quantities 1 L
Excepted Quantities E2
Mixed Packing Instructions for Packages P001 IBC02 R001
Special Packing Provisions for Packages
Packing Instructions for Portable Tanks T7
Special Provisions for Portable Tanks TP1 TP8 TP28
IMDG EMS F-E, S-E
Stowage and Handling Category B
Segregation
Marine Pollutant
ICAO/IATA
IATA Proper Shipping Name FLAMMABLE LIQUID, N.O.S.
Excepted Quantities E2
Passenger and Cargo Aircraft Limited Quantities Packing Instructions Y341
Passenger and Cargo Aircraft Limited Quantities Max net Qty 1L
Passenger and Cargo Aircraft Packing Instructions 353
Passenger and Cargo Aircraft Max net Qty 5L
Cargo Aircraft Packing Instructions 364
Cargo Aircraft Max net Qty 60L
Special Provisions A3
Emergency Response Guidebook (ERG) Code 3H
Labels 3



14.4 Packing group

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Packing group II

14.5 Environmental hazards

Environmental hazards Not classified as a Marine Pollutant.

14.6 Special precautions for user

Special precautions for user Not known.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

No information available

SECTION 15: Regulatory information

15.1 US Federal Regulations

Toxic and hazardous substances (29 CFR 1910; Subpart Z) Listed : 67-63-0

National emission standards for hazardous air pollutants (40 CFR 61.01) Not listed

SARA Title III Section 313 Not listed

TSCA (Toxic Substance Control Act) Listed : 67-63-0 (Active), 9003-39-8 (Active), 9002-89-5 (Active)

CAA 602 - Ozone Depleting Substances (ODS) Not listed

15.2 US State Regulations

State Right to Know Lists

Proposition 65 (California) Not listed

Minnesota Listed : 67-63-0

New Jersey Listed : 67-63-0

Pennsylvania Listed : 67-63-0

Rhode Island Listed : 67-63-0

15.3 Other

OSPAR List of Chemicals for Priority Action Not listed

OSHA (List of Highly Hazardous Chemicals, Toxics and Reactives) Not listed

NTP (National Toxicology Program) Not listed

IARC (International Agency for Research on Cancer) Listed : 67-63-0, 9003-39-8, 9002-89-5

SECTION 16: Other information

Indication of changes : 08/19/2020

Revision date : 2- Hazards identification
3- Composition/information on ingredients
8- Exposure controls/personal protection

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product