



Vision Miner NanoPolymer Adhesive

Safety Data Sheet

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

Date of issue: 12/20/2018

Revision date: 06/28/2019

Printed: 06/28/2019 Version: 1.2

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 1
Eye Damage/Irritation, Category 1
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, open flames, sparks, No smoking. - No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Wash hands thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Avoid breathing mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/ vapors/spray
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
If in eyes: 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.
If inhaled: Remove person to fresh air and keep comfortable for breathing
Call a poison center/doctor/.../if you feel unwell
Store in a well- ventilated place. Keep container tightly closed. Keep cool
Store locked up
In case of fire: Use alcohol resistant foam, carbon dioxide (CO2), dry extinguishing powder to

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extinguish

Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

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 irritation.

2.4. Unknown acute toxicity

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixture

Name	Product identifier	%
2-Propanol	(CAS No) 67-63-3	> 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 (l)(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. If 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

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 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.

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

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. Danger of slipping by leaking/spilling product. Avoid contact with eyes. Avoid breathing mist.

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : 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

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect all waste in suitable and labelled containers and dispose according to local legislation. Store away from other materials. Ensure all national/local regulations are observed.

6.4. Reference to other sections

No additional information available

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 : Read label before use. Obtain special instructions before use. Obtain special instructions before use. No open flames. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.

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 : Keep out of reach of children. 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

2-Propanol (67-63-0)		
ACGIH	ACGIH STEL (ppm)	400 ppm
ACGIH	ACGIH TWA (ppm)	020 ppm
OSHA	OSHA PEL (TWA) (mg/m ³) Final	980 mg/m ³
OSHA	OSHA PEL (TWA) (ppm) Final	400 ppm
OSHA	OSHA PEL (STEL) (mg/m ³) Final	1225 mg/m ³
OSHA	OSHA PEL (TWA) (ppm) Final	500 ppm

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8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

Personal protective equipment : Handle in accordance with good industrial hygiene and safety practices. Avoid all unnecessary exposure. For certain operations, additional Personal Protection Equipment (PPE) may be required.

Protective goggles. Gloves. Protective clothing. Insufficient ventilation: wear respiratory protection.



Hand protection : In case of repeated or prolonged contact wear gloves.

Eye protection : Wear goggles if splashing or spraying is anticipated.

Skin and body protection : 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.

Other information : Do not eat, drink or smoke during use.

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) – Clased 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
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

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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 : Causes serious 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

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

Specific target organ toxicity (single exposure) : Not classified
(Based on available data, the classification criteria are not met)

Specific target organ toxicity (repeated exposure) : Not classified
(Based on available data, the classification criteria are not met)

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- 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

- Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

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 the un-used product in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with applicable local, national and international regulations.
Dried inactive material may be disposed of as municipal waste.

SECTION 14: Transport information

- In accordance with DOT
- Transport document description : UN1993 Flammable liquids, n.o.s. (Contain Isopropanol), 3, II
- UN-No.(DOT) : UN1993
- Proper Shipping Name (DOT) : Flammable liquids, n.o.s.
(Contain Isopropanol)
- Transport hazard class(es) (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
- Hazard labels (DOT) : 3 - Flammable liquid



- DOT Symbols : G - Identifies PSN requiring a technical name
- Packing group (DOT) : II - Medium Danger

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- DOT Special Provisions (49 CFR 172.102) : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1).
T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / (1 + a (tr - tf))$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in §178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
- DOT Packaging Exceptions (49 CFR 173.xxx) : 150
DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
DOT Packaging Bulk (49 CFR 173.xxx) : 242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L
DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and
(ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

Additional information

- Other information : No supplementary information available.

Transport by sea

- UN-No. (IMDG) : 1993
Proper Shipping Name (IMDG) : FLAMMABLE LIQUID, N.O.S.
Class (IMDG) : 3 - Flammable liquids
Packing group (IMDG) : II - substances presenting medium danger

Air transport

- UN-No. (IATA) : 1993
Proper Shipping Name (IATA) : Flammable liquid, n.o.s.
Class (IATA) : 3 - Flammable Liquids
Packing group (IATA) : II - Medium Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Isopropyl alcohol (67-63-0)

CERCLA/SARA- Section 313- Emission Reporting	1.0% de minimis concentration (Only if manufactured by the strong acid process, no supplier notification)
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15.2. International regulations

No additional information available

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SECTION 16: Other information

Indication of changes : 06/28/2019

Revision date : 1-Identification of the substance/mixture and of the company/undertaking

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