Kemp Prototyping and Design

HyperLok High Temperature 3D Printing Adhesive

Date of preparation: 2/25/2023

Safety Data Sheet

Section 1: Identification

Product Name: HyperLok High Temperature 3D Printing Adhesive
Chemical Name/Synonyms: Isopropyl Alcohol

Use of Substance/Mixture: High Temperature 3D printing adhesive
Use Advised Against: None identified

In Emergency Call 911.
Supplier Contact Phone#: +1 (513) 460-7366

Section 2: Hazard(s) Identification

See https://www.sigmaaldrich.com/safety-center/globally-harmonized.html for a list of hazard classifications, signal words, hazard statements, pictograms, precautionary statements, and a description of hazards.

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

Signal Word(s): Danger

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

Pictograms:

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 CO2to extinguish. Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up. Dispose of this material and its container to hazardous or special waste collection point.
Other hazards:	Prolonged exposure may cause damage to the central nervous system. Can cause upper respiratory tract irritation.
Unknown Acute Toxicity:	Not applicable

Section 3: Composition/ Information on Ingredients

Substances: Not applicable

Mixture:

Chemical Name	Synonym	CAS#	Conc.
2-Propanol	Isopropyl Alcohol	67-63-0	> 50%

Section 4: First-Aid Measures

After Skin Contact:	Wash skin with plenty of water and soap. If skin irritation occurs: Get medical advice/attention.
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.
After Inhalation:	Remove person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. Consult a physician.
After Swallowing:	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.

Section 5: Fire-Fighting Measures

Suitable Extinguishing Agents: Foam. Dry powder. Carbon dioxide. Water spray. Sand.

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

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.

Section 6: Accidental Release Measures

Personal precautions: 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.

Measures for environmental protection: Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

Measures for cleaning/collecting: Absorb 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.

Section 7: Handling and Storage

Handling: Handle empty containers with care because residual vapors are flammable.

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.

Storage:	Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. 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. Aluminum. Halogenated compounds.
Incompatible Condition:	Direct sunlight. Heat sources. Open flames. Sparks.

Section 8: Exposure Controls/Personal Protection

(a) DOSH permissible exposure limit (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV), and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available
(b) Appropriate engineering controls
(c) Individual protection measures, such as personal protective equipment

Chemical Name	OSHA PEL	OSHA PEL (ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)

General protective and hygienic measures:
Breathing equipment:
Protection of hands:
Eye protection:

Section 9: Physical and Chemical Properties

Appearance:	Translucent viscous liquid
Form:	Liquid
Odor:	Alcohol-like
Odor threshold:	No data available
pH:	Not applicable
Melting point:	Not applicable
Boiling point:	ca 180°F (82°C) Estimated
Initial boiling point:	No data available
Flash point:	ca 54°F (12°C)- Clased cup
Evaporation rate:	No data available
Flammability:	Not applicable
Explosive limits:	No data available
Auto ignition temperature:	ca 800°F (430°C) Estimated
Danger of explosion:	No data available

Vapor pressure:	43hPa (at 68°F)
Vapor density:	No data available
Relative density:	No data available
Solubility in water:	No data available
Decomposition temperature:	No data available
Viscosity:	No data available

Section 10: Stability and Reactivity

Reactivity: Reacts with air to form peroxides.

Chemical stability: The product is stable at normal handling and storage condition.

Conditions to avoid: Vapors may form an explosive mixture with air.

Possibility of hazardous reactions: Hazardous polymerization will not occur. Vapors may form explosive mixture with air.

Incompatible materials: Oxidizing agents. Bleaching agent. Strong acids. Aluminum

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

Section 11: Toxicological Information

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: Not classified

Eye: Calculation method: Causes eye irritation.

Inhalation: Not classified

Ingestion: Calculation method: May lead to respiratory arrest, hypotension, and myocardial suppression

Carcinogenic effects: Not classified

(This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, NTP, or EPA classification at concentration greater than/equal to .1wt%)

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

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

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

Sensitization: Not classified

Target organs: Calculation method: May cause drowsiness or dizziness.

Section 12: Ecological Information

Ecotoxicity:

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

Persistence and Degradability:
No additional information available.

Mobility:
No additional information available.

Biodegradation:
No additional information available.

Bioaccumulation:
No additional information available.

Other Adverse Effects:

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

Section 13: Disposal Considerations

Waste Treatment Methods: 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.

Section 14: Transport Information

UN No. 1993
UN proper shipping name FLAMMABLE LIQUID, N.O.S. (Contain Isopropanol)

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	5L
DOT Quantity Limitations Cargo aircraft	60L
DOT Vessel Stowage Location	B

Transport by Sea/Air Transport:

IMDG Class	3
Special Provisions	274 601 640D
Limited Quantities	1L

Excepted Quantities	E2
Mixed Packing	P001 IBC02 R001
Instructions for Packages	
Special Packing Provisions for Packages	
Packing Instructions for Portable Tanks	T7
Special Provisions for Portable Tanks	TP1 TP8 TP28IMDG EMSF-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	
Labels	3

Packing Group: 2

Environmental Hazards: Not classified as a Marine Pollutant

Special Precautions for User: Not known.

Transport in bulk according: To Annex II of Marpol and the IBC CODE No information available

Section 15: Regulatory Information

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
Toxic and hazardous	Listed : 67-63-0

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

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, 90003-39-8, 9002-89-5

Section 16: Other Information

SDS date of preparation/update:

Initial Preparation Date	02/25/2023
Indication of changes	TBD