



# Tack Away

3D Print Wash Compound

## **SAFETY DATA SHEET**

Prepared: 06/01/2016

Revised: 06/01/2016

GHS Labelling  
Hazard pictograms:



GHS07      GHS02

Signal word: Danger

GHS FORMAT

# 1. Chemical Product and Company Identification

Product Identification: 3D Printing Wash  
Product Class: Mixture of Isopropyl Alcohol and Oils  
Product Use: For use 3D Printing photopolymers  
Company: Molecule Digital LLC  
5110 Port Chicago Hwy  
Suite A  
Concord, CA 94520  
Date of Preparation: 6/01/2016  
For Emergencies: Globally Call: +1 925 405 6606

## 2. Hazards Identification in Accordance with EC 1272/2008

### EMERGENCY OVERVIEW

COLOR: Light Yellow

PHYSICAL STATE: LIQUID

ODOR: Alcohol

\*Classification of the substance or mixture:

Flammable Liquids, Category 2

Eye irritation, Category 2A

Target Organ Systemic Toxicity, Single Exposure, Central nervous system Category 3

\*For the full text of the H-Statements mentioned in this Section, see Section 16.

### GHS/CLP LABELLING

Hazard pictograms:



GHS07

GHS02

SIGNAL WORD: Danger

### HAZARD STATEMENTS

H225 Highly flammable Liquid and vapour

H319 Causes serious eye irritation

H336 May cause drowsiness or dizziness

### PRECAUTIONARY STATEMENT(S)

Prevention:

P210 Keep away from heat/spark/open flames/hot surfaces. – No smoking

P233 Keep container tightly closed

P240 Ground/bond container and receiving equipment

P241 Use explosion-proof electrical/ventilating/lighting/equipment

P242 Use only non-sparking tools

P243	Take precautionary measures against static discharge
P261	Avoid breathing gas/mist/vapors/spray
P264	Wash skin thoroughly after handling
P270	Do not eat, drink or smoke when using this product
P272	Contaminated work clothing should not be allowed out of the workplace
P280	Wear protective gloves/protective clothing/eye protection/face protection

Response:

P303 + P361 + P353: IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 Call a POISON CENTER or doctor/ physician if you feel unwell

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P370 + P378 In Case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction

P403 + P223 Store in a well-ventilated place. Keep container tightly closed

P403 + P235 Store in a well-ventilated place. Keep cool.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

#### SUPPLEMENTAL HEALTH INFORMATION

Potential Health Effects:

Effects due to processing releases:

Irritating to eyes, respiratory system and skin. Prolonged or repeated exposure may cause: headache, drowsiness, nausea weakness (severity of effects depends on extent of exposure).

Other:

May form explosive peroxides

### 3. Composition/Information on Ingredient

Component	Approximate % by weight	CAS # & EINECS #	Hazardous Statements in accordance with EC 1272/2008	EU Classification according to Directive 67/548/ECC
2-Propanol*	80-95%	67-63-0 200-661-7	H225, H319, H336	Flam. Liq. 2: Eye Irrit. 2A: STOT SE 3; H319, H336
Non- Regulated	5-20			

\* Toxic chemical subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.

### 4. First-Aid Measures

Emergency Overview: This product is a liquid with a characteristic alcohol odor. This product may cause skin and eye irritation. The inhalation of high vapor concentration may cause a headache and nausea. There is no data available on the mixture itself. Procedure used to derive the classification according to Regulation (EC) No 1272/2008[CLP/GHS] See Sections 2 and 3 for details. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short term and long term exposure by oral, inhalation and dermal routes of exposure and eye contact. May be harmful or fatal if swallowed and enters airways.

Inhalation: In case of exposure to a high concentration of vapor or mist, remove person to fresh air. If breathing has stopped, administer artificial respiration and seek medical attention.

Eye Contact: Immediately flush with plenty of clean water (under eye lids) for at least 20 minutes. Hold eyelids apart to ensure flushing. Washing within one minute of contact is essential to achieve maximum effectiveness. Seek medical attention immediately.

Do not apply oil or oily ointments unless ordered by a physician.

Skin Contact: Remove contaminated clothing and rinse contact area thoroughly with soap and water. Particular attention should be paid to hair, nose, and ears, and other areas not easily cleaned. Wash clothing before reuse. If irritation develops, consult a physician.

Ingestion: Contact nearest Poison Control Center or local emergency telephone number for assistance and instructions. If ingested, dilute with water by giving glasses of water or milk to the victim. Do not give anything by mouth if the victim is rapidly losing consciousness, is unconscious, or convulsing. Do not induce vomiting. If vomiting occurs naturally, keep airways clear. Get medical attention. Provide an estimate of the time at which the material was ingested and the amount of the substance that was swallowed.

Note to Physician: Persons with pre-existing central nervous system (CNS) disease, neurological conditions, skin disorders, chronic respiratory diseases or impaired liver or kidney function should avoid exposure.

## 5. Fire-Fighting Measures

Flash Point: 12 °C / 53.6 °F

Method: Setaflash

VOC (g/l): 790 gr/lit

Ignition Temperature: No data

Lower Explosion Limit: 2% (V)

Upper Explosion Limit: 12.7% (V)

Extinguishing Media: Use water spray, carbon dioxide or dry chemical

Special Firefighting Procedures: Firefighters should wear full protection clothing and self-contained breathing apparatus (SCBA). Thoroughly decontaminate firefighting equipment including all firefighting apparel after the incident.

Unusual Fire & Explosion: Emits irritating vapors.

Exposure Hazard(s): Material — Irritant, Flammable

When burned, the following hazardous products of combustion can occur:

Carbon oxides

Hazardous organic compounds

## 6. Accidental Release Measures

Procedures of Personal Precautions: Wear adequate personal protective clothing and equipment, as outlined in Section 8.

Environmental Precautions: Contain spill to prevent spread into drains, sewers, water supplies, or soil. Avoid release into the environment. Dispose of in accordance with all applicable federal, state and local regulations.

Methods of Cleaning up: In the event of a spill, immediately remove all sources of ignition. Cover the liquid with inert absorbent.

Using appropriate personal protective equipment and non-sparking tools, contain spilled material.

Waste Disposal Method: Do not dispose of in sewers, lakes, rivers or streams. Scoop all contaminated material into compatible bottles or drums for proper disposal. Dispose of in accordance with all applicable federal, state and local regulations. National or regional provisions may also be in force.

## 7. Handling and Storage

Handling Precautions: User Exposure — This product should be used in well-ventilated areas. Product may cause irritation. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wash hands with soap and water before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored or processed. Launder contaminated clothing before reuse. Contaminated leather articles, including shoes, cannot be decontaminated and should be destroyed to prevent reuse. Solvents should never be used to clean hands or skin because they increase the penetration of the material into skin. Do not enter storage areas and confined spaces unless adequately ventilated

Storage Precautions: Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool, and well-ventilated area, away from incompatible materials and food and drink. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate contaminant to avoid environmental contamination

Special Requirements: Do not heat containers with steam or electrical equipment. Do not breathe fumes.

## 8. Exposure Controls & Personal Protection

### EXPOSURE LIMITS

Component	ACGIH TLV	ACGIH TLV	ACGIH TLV
2-Popanol	TWA 200ppm	STEL 400 ppm	ST 500 ppm

### EXPOSURE CONTROLS

**Engineering Controls:** Ensure adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If this is not sufficient to maintain concentrations of particulates and solvent vapors below the OEL, suitable respiratory protection must be worn.

**Respiratory Protection:** Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection. Use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or (CEN) (EU)

**Protective Gloves:** Wear impervious gloves (nitrile or neoprene) for routine handling. Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Eye and Face Protection:** Chemical splash goggles or a face shield is recommended during operations where splashing could occur. Wear protective eyewear (e.g., safety glasses with side-shield) at all times when handling this product. Always use protective eyewear when cleaning spills or leaks. Contact lenses pose a special hazard; soft lenses may absorb and concentrate irritants.

**Skin Protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves 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 Contact

Material: Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: 480 min

Material tested: Camatil (KCL 730 / Aldrich Z677442, Size M)

#### Splash Contact

Material: Nitrile rubber

Minimum layer thickness: 0.2 mm

Break through time: 60 min

Material tested: Dermatril P (KCL 743 / Aldrich Z677388, Size M)

#### Body Protection

Impervious clothing, flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Other Controls:** For operations where contact can occur a safety shower and eye wash facility should be available. Always use good personal hygiene and housekeeping practices. Wash hands thoroughly after handling.

**Environmental Exposure Controls:** Keep product from waterways and watersheds. This substance is not readily biodegradable and is dangerous for the environment. Avoid release into the environment.

## 9. Physical & Chemical Properties

Appearance: Liquid, Light Yellow

Odor: Characteristic/Alcohol

	Value	Units	Method
Specific Gravity	.79	Water=1	
Boiling Point	82	C	

Flash Point	12	C	Closed Cup
Ignition Temperature	425	C	
Surface Tension	28.08	Nm/m @ 25C	None

Vapor Pressure: 43.2 hPa (32.4 mmHg) at 20.0C (68F)

Solubility in Water: Completely soluble

Volatile Characteristics: Highly volatile

Vapor Rate: 3

## 10. Stability and Reactivity

Stability: Stable when stored in original container.

Chemical Stability: Test for peroxide formation before distillation or evaporation. Test for peroxide formation or discard after 1 year.

Incompatible Materials: Oxidizing agents, Acid anhydrides, aluminum, Halogenated compounds, Acids.

Conditions to avoid: Heat, flames and sparks, Extremes of temperature and direct sunlight.

## 11. Toxicological Information

Component	Toxicity	Value	Quantity	Units	Source
2-Propanol	Acute Oral Toxicity – Oral Rat	LD50>	5045	mg/kg body weight	Vendor Literature
	Acute Inhalation Toxicity - Rat	LC50>	16000	Ppm 8 hr	Vendor Literature
	Acute Dermal Toxicity - rat	LD50>	12800	mg/kg body weight	Vendor Literature

Serious Eye Damage/eye Irritation:

Eye – Rabbit

Result: Eye irritation – 24hr

Carcinogenicity: This product is or contains a component that is NOT classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: 3 – Group 3: Not classified as to its carcinogenicity to humans (2-Propanol)

NTP: No component of this product present at levels greater or equal to 0.1% is defined as a carcinogen or potential carcinogen.

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

Individual components of this product are not reported to produce mutagenic effects in humans. None of the components of this material are listed by IARC, NTP, OSHA or ACGIH as carcinogens.

## 12. Ecological Information





Keep product from waterways and watersheds. This substance is not readily biodegradable. Dispose of in accordance with all applicable federal, state and local regulations.

## 13. Disposal Considerations

Dispose of in accordance with governmental regulations (community, national or regional). Contact a licensed professional waste disposal service to dispose of this mixture. As with all foreign substances, do not allow to enter storm or sewer drainage systems. Avoid release into the environment.

Contaminated Packaging: Dispose of as unused product. Expose the open emptied container to light until material has solidified, then dispose. If material is not solid then container must be disposed of according to local regulations.

## 14. Transport Information

	DOT	IATA	IMDG	ADR/RID
UN Number	UN1210	UN1210	UN1210	UN1210
Proper Shipping Name	Printing ink related material	Printing ink related material	Printing ink related material	Printing ink related material
Hazard Class	3	3	3	3
Subsidiary Class	NA	NA	NA	NA
Packing Group	II	II	II	II
Labels Required				
ERG Guide Number	129	129	129	129
EmS Code	NA	NA	F-E, S-D	NA
ORM-D authorized?	≤ 1 liters (49CFR 173.150)			

## 15. Regulatory Information

The following provides a summary of the legal requirements.

### FULL TEXT OF ANY R-PHRASES AND S-PHRASES:

Eye Irrit	Eye irritation
Flam. Liq	Flammable Liquids
H225	Highly flammable liquid and vapor
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness
STOT SE	Specific target organ toxicity – single exposure
Risk Phrases:	
R36/37/38	Irritating to eyes, respiratory system and skin
Safety Phrases:	
S3	Keep in a cool place
S7/9	Keep container
S20	When using do not eat or drink
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S29	Do not empty into drains
S36	Wear suitable protective clothing
S37/39	Wear suitable gloves and eye/face protection

California Proposition 65: This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

### 2-Propanol

Sara Title III Listing	
Section 302/355 (extremely hazardous substance)	not subject to reporting
Section 311/312 (hazard category)	Fire hazard, Acute Health Hazard, Chronic Health Hazard
Section 313 (toxic chemical listings)	Hazard
Chemical Inventory Status	listed
US TSCA Inventory (toxic substance control act)	listed
US TSCA 12(b) Export Notification	

EU EINECS/ELINCS	
Canadian Domestic Substance List (DSL/NDSL)	
DSL limit 0.1%	
DSL limit 1.0%	
China IESCS (CN)	
Japan ENCS (JP)	
Japan ISHL (JP)	
Japan IMITI (JP)	
Korea KECI (KR)	
Philippines PICCS (PH)	
Australia AICS	
New Zealand NZIOC	
Proposition 65	
Chemicals known to cause cancer	not listed
Chemicals known to cause reproductive toxicity for females	not listed
Chemicals known to cause reproductive toxicity for males	not listed
Chemicals known to cause developmental toxicity	not listed
Carcinogenic categories	
EPA (environmental protection agency)	
NIOSH-Ca (National institute for occupational safety and health)	
OSHA-Ca	
CERCLA	
Reportable Quantities	
Right To Know	
Massachusetts	Listed
Pennsylvania	Listed
New Jersey	Listed

## 16. Other Information

HMIS (Hazardous Materials Information System) for secondary labelling:

<b>HMIS</b>	
<b>Health</b>	<b>2</b>
<b>Flammability</b>	<b>3</b>
<b>Reactivity</b>	<b>0</b>
<b>Personal Protection</b>	<b>D</b>

### Abbreviations

IOELVs	Indicative Occupational Exposure Limit Values
TWA	Time Weighted Average
OEL	Occupational Exposure Limits
PEL	Permissible Exposure Limit
TLV	Threshold Limit Value
STEL	Short Term Exposure Limit
WEEL	Workplace Environmental Exposure Level by the American Industrial Hygiene Association

### REFERENCES:

1. Raw Material Manufacturers Material Safety Data Sheets
2. IARC International Agency for Research on Cancer
3. NTP National Toxicology Program - RoC Report on Carcinogens



4. 2011 Threshold Limit Values and Biological Exposure Indices. American Conference of Governmental Industrial Hygienists.
5. SAX' S Dangerous Properties of Industrial Materials, Tenth Edition
6. TSCA & SARA Title III, U.S. Environmental Protection Agency and the National Technical Information Services
7. US National Institute of Medicines Toxnet current edition
8. ESIS: European Chemical Substance Information System, <http://ecb.jrc.it/esis>
9. NOHSC Hazardous Information Substances Information System, Department of Employment and Workplace Relations,

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