

# Safety Data Sheet

Revision Date: 6-26-2023

## 1. Product and Company Identification

**Product Name:** Replicating Solution

**Product Catalog Number(s):** 12005

**Identified Uses:** Laboratory chemicals, Manufacture of substances

**Supplier of the Safety Data Sheet:**

Ladd Research

3 Ewing Place

Essex Junction, VT 05452 USA

**Telephone:** (802) 658-4961

**FAX:** (802) 660-8859

**Emergency Telephone Number:** (800) 424-9300 (Chemtrec)

## 2. Hazards Identification

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Flammable Liquids (Category 2), H225

Eye irritation (Category 2A), H319

Specific target organ toxicity – single exposure (Category 3), Central nervous system, H336

**GHS Label elements, including precautionary statements**



Pictograms

Signal word

Danger

Hazard statement(s)

H225 Highly flammable liquid and vapor

H319 Causes serious eye irritation

H336 May cause drowsiness or dizziness

Precautionary statement(s)

P210 Keep away from heat/sparks/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 dust/fume/gas/mist/vapors/spray
P264	Wash skin thoroughly after handling
P271	Use only outdoors or in a well-ventilated area
P280	Wear protective gloves/protective clothing/eye protection/face protection
P303, P361,P353	If on Skin: immediately remove/take off 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, P233	Store in a well-ventilated place. Keep container tightly closed.
P403, P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up
P501	Dispose of contents/container to an approved waste disposal plant.

#### **Hazards not otherwise classified or not covered by GHS**

Repeated exposure may cause skin dryness or cracking.

### **3. Composition/Information on Ingredients**

<b>Hazardous Components</b>	<b>Classification</b>	<b>Concentration</b>
<b>Acetone</b>		
CAS No. 67-64-1	Flam. Liq. 2; Eye irrit, 2A;	>90%
EC No. 200-662-2	STOT SE 3; H225, H319	
Index No. 606-001-00-8	H336	
<b>Cellulose Diacetate</b>		
CAS No. 9035-69-2	Expl. 1.1; H201	<10%

### **4. First Aid Measures**

**General Advice:** Consult a physician. Show this SDS to the doctor in attendance. Move out of dangerous area.

**If inhaled:** If inhaled, move person into fresh air. If not breathing, give artificial respiration.

Consult a physician.

**In case of skin contact:** Wash with soap and plenty water. Consult a physician

**In case of eye contact:** Rinse thoroughly with plenty water for at least 15 minutes and consult a physician.

**If swallowed:** DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## 5. Firefighting Measures

**Extinguishing Media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special Hazards arising from the substance or mixture:** Carbon oxides.

**Advice for firefighters:** Wear self-contained breathing apparatus for firefighting if necessary.

**Further Information:** Use water spray to cool unopened containers.

## 6. Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures:** Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

**Environmental precautions:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Methods and materials for containment and cleaning up:** Contain spillage and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in a container for disposal according to local regulations.

**For Disposal see section 13**

## 7. Handling and Storage

**Precautions for safe handling:** Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use explosion-proof equipment. Keep away from sources of ignition. No smoking. Take care to prevent the buildup of electrostatic charge.

**Conditions for safe storage, including any incompatibilities:** Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

## 8. Exposure Controls / Personal Protection

Component	CAS No.	Value	Control	
			Parameters	Basis
Acetone	67-64-1	TWA	500ppm	USA, ACGIH TLV
	Remarks:	Eye & upper respiratory tract irritation Central nervous system impairment Hematologic effects Not classifiable as a human carcinogen		
		STEL	750ppm	USA ACGIH TLV
		Eye & upper respiratory tract irritation Central nervous system impairment Hematologic effects Not classifiable as a human carcinogen		

**Engineering Controls:** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday.

**Eye/Face Protection:** Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards, e.g. NIOSH (US) or EN (EU)

**Skin Protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique 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.

**Body Protection:** Wear 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.

**Respiratory Protection:** Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (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.

**Control of Environmental Exposure:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

## 9. Physical and Chemical Properties

**Appearance:** Clear, colorless to slightly amber liquid

**Odor:** No data available

**Melting Point:** -94°C

**Boiling Point:** 56°C at 1 atmosphere

**Flash Point:** -17°C – closed cup

**Evaporation Rate:** no data available

**Upper/Lower flammability or explosive limits:** UEL 13%, LEL 2%

**Vapor pressure:** 533.3 hPa at 39.5°C, 245.3 hPa at 20.0°C

**Auto-ignition temperature:** 465°C

## 10. Stability and Reactivity

**Reactivity:** No data available

**Chemical Stability:** Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** Vapors may form explosive mixture with air.

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

**Incompatible Materials:** Bases, oxidizing agents, reducing agents. Violent reaction with phosphorous oxychloride.

**Hazardous Decomposition Products:** no data available

## 11. Toxicological Information

**Acute Toxicity:**

LD50 Oral – rat – 5,800 mg/kg

Remarks: Behavioral: altered sleep time (including change in righting reflex). Tremor.

Headache. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

LC50 Inhalation – rat – 8 h – 50,100 mg/m<sup>3</sup>

Remarks: Drowsiness, dizziness and unconsciousness

**Skin Corrosion/Irritation:**

Skin (Rabbit): Mild skin irritation – 24 h

**Serious Eye Damage/Eye Irritation:**

Eyes (Rabbit): Eye irritation – 24 h

**Respiratory or Skin Sensitization:**

Guinea Pig: Does not cause skin sensitization.

**Germ Cell Mutagenicity:** no data available

**Carcinogenicity**

**IARC:** No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible or confirmed human carcinogen by IARC.

**NTP:** No component 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 component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive Toxicity:** No data available

**Specific Target Organ Toxicity – Single Exposure:** May cause drowsiness or dizziness.

**Specific Target Organ Toxicity – Repeated Exposure:** No data available

**Aspiration Hazard:** No data available

**Additional Information:**

RTECS: AL3150000 (acetone)

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

## 12. Ecological Information

**Toxicity:**

Toxicity to fish: LC50 – *Oncorhynchus mykiss* (rainbow trout) – 5,540 mg/l – 96hr

Toxicity to algae: No data available.

**Persistence and Degradability:**

Biodegradability – Result 91%. Readily biodegradable (OECD Test Guideline 301B)

**Bioaccumulative Potential:** Does not bioaccumulate

**Mobility in Soil:** No data available

**Other Adverse Effects:** No data available.

## 13. Disposal Considerations

**Waste Treatment Methods**

**Product:** Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated Packaging:** Dispose of as unused product.

## 14. Transport Information

### DOT (US)

UN Number: 1090      Class: 3      Packing group: II

Proper shipping name: Acetone solution

Reportable Quantity (RQ): 5,000 lbs

### IMDG

UN Number: 1090      Class: 3      Packing Group: II      EMS-No: F-E, S-D

Proper shipping name: Acetone

### IATA

UN Number: 1090      Class: 3      Packing Group: II

## 15. Regulatory Information

**SARA 302 Components:** No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components:** This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards:** Fire Hazard, Acute Health Hazard, Chronic Health Hazard

### Massachusetts Right To Know Components:

Acetone      CAS [67-64-1]      Revision Date: 2007-03-01

Cellulose Acetate      CAS [9035-69-2]      Not applicable

### Pennsylvania Right to Know Components:

Acetone      CAS [67-64-1]      Revision Date: 2007-03-01

Cellulose Acetate      CAS [9035-69-2]      Not applicable

### New Jersey Right to Know Components:

Acetone      CAS [67-64-1]      Revision Date: 2007-03-01

Cellulose Acetate      CAS [9035-69-2]      Not applicable

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

## 16. Other Information

### Full text of H-Statements referred to under sections 2 and 3

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

### HMIS Rating

Health Hazard: 2

Chronic Health Hazard: \*

Flammability: 3

Physical Hazard: 0

### NFPA Rating

Health Hazard: 2

Fire Hazard: 3

Reactivity Hazard: 0

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