iRepertoire, Inc.

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name : iR-RT-PCR1 Buffer Mix

Recommended use of the chemicals and restrictions on use

Recommended use : Laboratory - Research Use Only

Manufacturer's or suppliers details

Company : iRepertoire, Inc.
800 Hudson Way
Suite 2304
Huntsville, Alabama 35806 USA

Telephone Number : 1 (256) 327-0948

Email Address : info@irepertoire.com

Emergency Telephone

Telephone Number (8:00am to 5:00pm M-F) : 1 (256) 327-0948

SECTION 2. HAZARDS

GHS Classification : Not a hazardous substance or mixture.

GHS Label element : Not a hazardous substance or mixture.

Potential Health Effects : Aggravated Medical Condition: None Known.
Symptoms of Overexposure: No information available.

Other Hazard : None known.

Caricinogenicity:

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

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

NTP : No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

iRepertoire, Inc.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture : Mixture

Hazardous ingredients

Chemical Name	CAS-No.	Concentration [%]
Glycerol	56-81-5	0.5 - 2%

SECTION 4. FIRST MEASURES

General advice : Show this material safety data sheet to the doctor in attendance.

If inhaled : Move to fresh air. If symptoms persist, obtain medical attention.

In case of skin contact : Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, obtain medical attention.

In case of eye contact : Remove contact lenses. Protect unharmed eye.
Rinse thoroughly with plenty of water for at least 15 minutes and obtain medical attention.

If swallowed : If accidentally swallowed obtain immediate medical attention. Rinse mouth with water. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed : No information available.

Notes to physician : No information available.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards during fire fighting : Exposure to decomposition products may be a hazard to health.

Hazardous combustion products : No hazardous combustion products are known

Specific extinguishing methods : No specific extinguishing methods identified.

Further Information : In the event of fire and/or explosion do not breathe fumes.

Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting as necessary in the event of a chemical fire.

iRepertoire, Inc.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
Environmental precautions	:	Prevent further leakage or spillage if safe to do so.
Methods and materials for containment and cleaning up	:	Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area.
Conditions for safe storage	:	Keep container tightly closed in a dry and well-ventilated place.
Materials to avoid	:	Do not store near acids.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Ingredients	CAS-No.	Basis	Value type (form of exposure)	Control parameters/ Permissible concentrations
Glycerol	56-81-5	OSHA: 29 CFR 1910.1000 Table Z-1 Limits for Air contaminants	PEL-TWA (mist, respirable fraction)	5 mg/m3
			PEL-TWA (mist, total dust)	15 mg/m3

Engineering Controls

No special engineering controls required. Use with good general ventilation.

Personal Protective Equipment (PPE)

Eye protection	:	Wear safety glasses or chemical goggles to prevent eye contact.
Skin and body protection	:	Wear protective clothing and impervious gloves, as appropriate. Footwear protecting against chemicals recommended. Note: To choose an appropriate glove, review the information given by the glove manufacturer concerning permeability and break through times. Also, consider special workplace conditions (mechanical strain, duration of contact).
Respiratory protection	:	Under normal conditions, this material does not require respiratory protection.
Hygiene measures	:	Keep away from food and drink.Wash hands before breaks and at the end of workday. Ensure adequate ventilation, especially in confined areas. Avoid contact with the skin and the eyes. When using do not eat, drink or smoke.

iRepertoire, Inc.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Liquid
Color	:	Colorless
Odor	:	Characteristic
Odor Threshold	:	No data available
pH	:	No data available
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	No data available
Evaporation rate	:	No data available
Flammability (liquid, gas)	:	No data available
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapor Pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	No data available
Density	:	No data available
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	No data available
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available

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SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	Stable under recommended storage conditions. Hazardous decomposition products formed under fire conditions Keep away from oxidizing agents, and acidic or alkaline products.
Conditions to avoid	:	No data available
Incompatible materials	:	No data available
Hazardous decomposition products	:	No decomposition if stored and applied as directed.

SECTION 11. TOXOLOGICAL INFORMATION

Acute toxicity

Product

Acute oral toxicity	:	No data available
Acute inhalation toxicity	:	No data available
Acute dermal toxicity	:	No data available

Hazardous Ingredients (Pure Substance)

Glycerol (CAS# 56-81-5)	:	LD50 Oral Rat 12,000 mg/kg, LD50 Dermal Rabbit 10,000 mg/kg

Skin corrosion/irritation

Product	:	Not classified based on available information. May cause skin irritation in susceptible persons.

Hazardous Ingredients (Pure Substance)

Glycerol (CAS# 56-81-5)	:	Species: Rabbit; Exposure time: 24 h; Result: Mild skin irritation

Serious eye damage/eye irritation

Product	:	Not classified based on available information. May irritate eyes.

Hazardous Ingredients (Pure Substance)

Glycerol (CAS# 56-81-5)	:	Species: Rabbit; Exposure time: 24 h; Result: Mild eye irritation

Respiratory or skin sensitization	:	No data available
Germ cell mutagenicity	:	No data available

Carcinogenicity	:	No ingredient in this product is listed as a carcinogen by IARC, NTP or OSHA.
Reproductive toxicity	:	No data available
STOT-single exposure	:	No data available
STOT-repeated exposure	:	No data available
Aspiration toxicity	:	No data available
Further information	:	No further information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product

Toxicity to fish	:	No data available
Toxicity to algae	:	No data available
Toxicity to bacteria	:	No data available

Hazardous Ingredients (Pure Substance)

Glycerol (CAS# 56-81-5) - Toxicity to fish	:	LC0 (Leuciscus idus (Golden orfe)): > 250 mg/l Exposure time: 48h

Persistance and degradability No data available

Bioaccumulative potential

Bioaccumulation	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Mobility in soil	:	No data available
Other adverse effects	:	No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Send to a licensed waste management company. Dispose of as hazardous waste in compliance with local and national regulations.
Contaminated packaging	:	Dispose of as unused product. Do not re-use empty containers.

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SECTION 14. TRANSPORT INFORMATION

UNRTDG	:	Not regulated as a dangerous good.
IATA-DGR	:	Not regulated as a dangerous good.
IMDG-Code	:	Not regulated as a dangerous good.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	:	No data available
Domestic Regulation (49 CFR)	:	Not regulated as a dangerous good.
Special precautions for user	:	No special precautions identified.

SECTION 15. REGULATORY INFORMATION

US Federal and State Regulations

EPCRA-Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity (40 CFR 302.4)

This material does not contain any components with a CERCLA RQ listed in Table 302.4.

SARA 304 Extremely Hazardous Substance Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards

No SARA 311/312 hazards identified.

SARA 302

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

SARA 313

This material does not contain any chemical components that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65

This product does not contain any of California to cause cancer, birth, or any other reproductive defects.

SECTION 16. OTHER INFORMATION

Further Information

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

SDS Version: 202207