iRepertoire, Inc.

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	:	PCR 2 Rxn 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.

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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture : Mixture

Hazardous ingredients

Chemical Name	CAS-No.	Concentration [%]
Tris HCl	1185-53-1	>= 1- < 5
Glycerol	56-81-5	>= 1- < 5

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 : Rinse with water as a precaution.

In case of eye contact : Remove contact lenses. Rinse opened eye thoroughly with running water for several minutes. If symptoms persist, obtain medical attention.

If swallowed : Rinse mouth with water. If symptoms persist, obtain medical attention.

Most important symptoms and effects, both acute and delayed : None known.

Notes to physician : No information available.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Use carbon dioxide (CO_2), extinguishing powder or water spray. In case of large fires use water spray or alcohol resistant foam, or use extinguishing measures appropriate to local circumstances and surrounding environment.

Specific hazards during fire fighting : No specific hazards identified.

Hazardous combustion products : No hazardous combustion products are known.

Specific extinguishing methods : No specific extinguishing methods required.

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.

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SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment (see Section 8). No special precautions necessary.
Methods and materials for containment and cleaning up	:	Keep in suitable, closed containers for disposal. Absorb spills with liquid-binding material (sand, diatomite, universal binders, sawdust, etc.) Do not allow to enter sewers, surface or ground water.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	No special precautions. Use good laboratory practices. For personal protection information, see Section 8.
Conditions for safe storage	:	Store according to the product label.

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	:	Protective clothing, impervious gloves and 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. When using do not eat, drink, or smoke.

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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	:	Not applicable
Evaporation rate	:	No data available
Flammability (liquid, gas)	:	Not applicable
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	:	Fully miscible
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	Not applicable
Thermal decomposition	:	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.
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 availabie
Germ cell mutagenicity	:	No data availabie
Carcinogenicity	:	No ingredient in this product is listed as a carcinogen by IARC, NTP or OSHA.

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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

Product waste disposal	:	Dispose of waste product, unused product and contaminated packaging in compliance with federal, state and local regulations. If unsure of the applicable requirements, contact the authorities for information.

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SECTION 14. TRANSPORT INFORMATION

UNRTDG	:	Not classified as dangerous in the meaning of transport regulations.
IATA-DGR	:	Not classified as dangerous in the meaning of transport regulations.
IMDG-Code	:	Not classified as dangerous in the meaning of transport regulations.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	:	Not applicable
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 313

Ammonium Sulphate (CAS# 7783-20-2)

Section 355 (extremely hazardous substances)

No ingredients are listed.

TSCA (Toxic Substances Control Act) Inventory)

Tris HCl (CAS# 1185-53-1), Glycerol (CAS# 56-81-5)

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.

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