

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name RiboZol, RNA Extraction Reagent

Other means of identification

Product Code(s) N580

UN/ID no. 2821

Synonyms No information available

Recommended use of the chemical and restrictions on use

Recommended Use For Further Manufacturing Use Only.

Uses advised against Not for Human or Animal Drug Use

Details of the supplier of the safety data sheet

Company Address

VWR International, LLC
Radnor Corporate Center
100 Matsonford Road
Radnor, PA 19087-8660

Manufacturer Address

VWR International, LLC
28600 Fountain Parkway
Solon, Ohio 44139

Company Phone Number 1-800-448-4442

E-mail Address info@amresco-inc.com

Emergency Telephone Number

Emergency Telephone Number Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute Toxicity - Oral	Category 3
Acute Toxicity - Dermal	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin Corrosion/Irritation	Category 1 Sub-category B
Serious Eye Damage/Eye Irritation	Category 1
Germ cell mutagenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 2

Label elements

Emergency Overview

Danger

Hazard statements

H301 - Toxic if swallowed

H312 - Harmful in contact with skin

H314 - Causes severe skin burns and eye damage

H332 - Harmful if inhaled

H341 - Suspected of causing genetic defects

H373 - May cause damage to organs through prolonged or repeated exposure



Appearance Pink Clear

Physical State Liquid Solution

Odor No information available

Precautionary Statements - Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear protective gloves/protective clothing/eye protection/face protection
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

Specific treatment (see .? on this label)
Immediately call a POISON CENTER or doctor
Specific treatment (see .? on this label)
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor
Call a POISON CENTER or doctor if you feel unwell
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower
Wash contaminated clothing before reuse
IF INHALED: Remove person to fresh air and keep comfortable for breathing
Immediately call a POISON CENTER or doctor
IF SWALLOWED: Immediately call a POISON CENTER or doctor
Rinse mouth
Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not regulated

Other Information

- Toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	EC No.	Weight %	Trade Secret
Phenol	108-95-2	203-632-7	30-40	Not applicable
Guanidine thiocyanate	593-84-0	209-812-1	20-30	Not applicable
Glycerol	56-81-5	200-289-5	1-5	Not applicable

4. FIRST AID MEASURES

First Aid Measures

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin Contact	Use copious amounts of glycerol or polyethylene glycol, then rinse off under running water. Repeat as necessary.
Inhalation	Move to fresh air. If not breathing, give artificial respiration.
Ingestion	Clean mouth with water. Do NOT induce vomiting. Call a physician or Poison Control Center immediately.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms/Effects No information available.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

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

Unsuitable Extinguishing Media No information available.

Specific Hazards Arising from the Chemical

No information available.

Hazardous Combustion Products Carbon oxides. Nitrogen oxides (NO_x). Sulfur oxides. Hydrogen cyanide.

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal protection Ensure adequate ventilation, especially in confined areas.

Environmental Precautions

Environmental Precautions See Section 12 for additional Ecological information.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Cover with dry lime or soda ash. Pick up and transfer to properly labeled containers. Ventilate area and wash spill site after material pickup is complete.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Handling Handle in accordance with good industrial hygiene and safety practice. Protect from light and moisture.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from light.

Incompatible Products Strong oxidizing agents. Strong acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Phenol 108-95-2	TWA: 5 ppm	TWA: 5 ppm TWA: 19 mg/m ³	IDLH: 250 ppm Ceiling: 15.6 ppm Ceiling: 60 mg/m ³ TWA: 5 ppm TWA: 19 mg/m ³
Guanidine thiocyanate 593-84-0	-	-	-
Glycerol 56-81-5	-	TWA: 15 mg/m ³ TWA: 5 mg/m ³	-

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Avoid contact with eyes. Safety glasses with side-shields.

Skin and Body Protection Wear protective gloves/clothing.

Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid Solution	Odor	No information available
Appearance	Pink Clear	Odor Threshold	No information available
Color	No information available		
Property	Values	Remarks • Method	
pH	No information available		
Melting point/freezing point	No information available		
Boiling Point/Range	No information available		
Flash Point (High in °C)	No information available		
Evaporation Rate	No information available		
Flammability (solid, gas)	No information available		
Flammability Limit in Air	No information available		
Upper flammability limit:	No information available		
Lower flammability limit:	No information available		
Vapor pressure	No information available		

Vapor Density	No information available
Specific Gravity	No information available
Water Solubility	No information available
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition Temperature	No information available
Decomposition Temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	No information available
Explosive Properties	No information available
Oxidizing Properties	No information available

Other Information

Softening Point	No information available
Molecular Weight	No information available
VOC Content	No information available
Density	No information available
Bulk Density	No information available

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to Avoid

Protect from light.

Incompatible Materials

Strong oxidizing agents. Strong acids.

Hazardous Decomposition Products

Carbon oxides. Nitrogen oxides (NOx). Sulfur oxides. Hydrogen cyanide.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Harmful by inhalation.
Eye Contact	Contact with moisture can cause caustic conditions resulting in burns and eye damage.
Skin Contact	Harmful in contact with skin. May cause burns.
Ingestion	Toxic if swallowed.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Phenol 108-95-2	= 317 mg/kg (Rat) = 340 mg/kg (Rat)	= 630 mg/kg (Rabbit)	= 316 mg/m ³ (Rat) 4 h
Guanidine thiocyanate 593-84-0	593 mg/kg	-	-
Glycerol 56-81-5	= 12600 mg/kg (Rat)	> 10 g/kg (Rabbit)	> 570 mg/m ³ (Rat) 1 h

Information on toxicological effects

Symptoms	No information available.
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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Mutagenic Effects No information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Phenol 108-95-2	-	Group 3	-	-
Guanidine thiocyanate 593-84-0	-	-	-	-
Glycerol 56-81-5	-	-	-	-

Reproductive Toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Chronic Toxicity Suspected mutagen.
Target Organ Effects Central nervous system (CNS), Kidneys, Liver.
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

12. ECOLOGICAL INFORMATION

Ecotoxicity

12.87% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Toxicity to Fish	Crustacea
Phenol 108-95-2	187 - 279: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50 static 46.42: 96 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50 0.0188 - 0.1044: 96 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50 static	20.5 - 25.6: 96 h <i>Pimephales promelas</i> mg/L LC50 static 5.449 - 6.789: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 flow-through 11.9 - 50.5: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through 32: 96 h <i>Pimephales promelas</i> mg/L LC50 5.0 - 12.0: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 13.5: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static 0.00175: 96 h <i>Cyprinus carpio</i> mg/L LC50 semi-static 31: 96 h <i>Poecilia reticulata</i> mg/L LC50 semi-static 34.09 - 47.64: 96 h <i>Poecilia reticulata</i> mg/L LC50 static 33.9 - 43.3: 96 h <i>Oryzias latipes</i> mg/L LC50 flow-through 11.9 - 25.3: 96 h <i>Lepomis macrochirus</i> mg/L LC50 flow-through 11.5: 96 h <i>Lepomis macrochirus</i> mg/L LC50 semi-static 27.8: 96 h <i>Brachydanio rerio</i> mg/L LC50 23.4 - 36.6: 96 h <i>Oryzias latipes</i> mg/L LC50 static 7.5 - 14: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 static 4.23 - 7.49: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 semi-static	4.24 - 10.7: 48 h <i>Daphnia magna</i> mg/L EC50 Static 10.2 - 15.5: 48 h <i>Daphnia magna</i> mg/L EC50
Guanidine thiocyanate 593-84-0	-	-	-
Glycerol 56-81-5	-	51 - 57: 96 h <i>Oncorhynchus mykiss</i> mL/L LC50 static	500: 24 h <i>Daphnia magna</i> mg/L EC50

Persistence and Degradability
No information available.

Bioaccumulation/Accumulation

No information available.

Chemical Name	Partition coefficient
Phenol 108-95-2	1.47
Guanidine thiocyanate 593-84-0	-
Glycerol 56-81-5	-1.76

Other Adverse Effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Method

Dispose of material in accordance with all federal, state, and local regulations.

Contaminated Packaging

Do not re-use empty containers.

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Phenol 108-95-2	-	-	-	-
Guanidine thiocyanate 593-84-0	-	-	-	-
Glycerol 56-81-5	-	-	-	-

Chemical Name	California Hazardous Waste Status
Phenol 108-95-2	Toxic; Corrosive
Guanidine thiocyanate 593-84-0	-
Glycerol 56-81-5	-

14. TRANSPORT INFORMATION

DOT

UN/ID no. 2821
Proper shipping name PHENOL SOLUTIONS
Hazard Class 6.1
Packing Group III

IATA

UN/ID no. 2821
Proper shipping name PHENOL SOLUTION
Hazard Class 6.1
Packing Group III

15. REGULATORY INFORMATION

International Inventories

TSCA Does not comply
DSL/NDL Does not comply
EINECS/ELINCS Does not Comply
ENCS Does not Comply

IECSC	Complies
KECL	Does not Comply
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Component	SARA 313 - Threshold Values %
Phenol 108-95-2 (30-40)	1.0
Guanidine thiocyanate 593-84-0 (20-30)	-
Glycerol 56-81-5 (1-5)	-

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Phenol 108-95-2	1000 lb	X	X	X
Guanidine thiocyanate 593-84-0	-	-	-	-
Glycerol 56-81-5	-	-	-	-

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Phenol 108-95-2	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ
Guanidine thiocyanate 593-84-0	-	-	-
Glycerol 56-81-5	-	-	-

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

Chemical Name	California Prop. 65
Phenol - 108-95-2	-
Guanidine thiocyanate - 593-84-0	-
Glycerol - 56-81-5	-

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Phenol 108-95-2	X	X	X
Guanidine thiocyanate 593-84-0	-	-	-
Glycerol 56-81-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not regulated

16. OTHER INFORMATION

Issuing Date 08-Jun-2010

Revision Date 08-Jan-2016

Revision Note

No information available

Disclaimer

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. VWR International and its Affiliates shall not be held liable for any damage resulting from handling.

End of Safety Data Sheet