



**INNOVATIVE
CHEMICAL
CORPORATION**

7769 95th Street South
Cottage Grove, MN 55016

SAFETY DATA SHEET

Revision Date: 6/2/2015

Emergency Phone: 1-800-535-5053 (Infotrac)

Section 1: Identification

Product Name: Revive

Code: 98PRV00

Chemical Type: Liquid

Manufacturer/Supplier:

Innovative Chemical Corporation
7769 95th Street South
Cottage Grove, MN 55016
651-649-1762

Section 2: Hazard(s) Identification

OSHA/HCS status

While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture: Not classified

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 1%

Label elements

Signal word: Warning

Hazard statements: Irritant (skin and eye).



Precautionary Statements

Prevention: Not applicable.

Response: Not applicable.

Storage: Not applicable.

Disposal: Not applicable.

Hazards not otherwise classified: None known.

Section 3: Composition/Information on Ingredients

Substance or mixture: Mixture

Other means of identification: Not available.

CAS number/other identifiers

CAS number: Not applicable.

Hazardous Components		
Chemical Name	%weight	CAS number
tris(2-butoxyethyl) phosphate	1-3	78-51-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation. There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section. Occupational limits, if available are listed in Section 8.

Section 4: First-Aid Measures

Description of first aid measures

Eyes	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Skin	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	Eye irritant.
Inhalation	No known significant effects or critical hazards.
Skin contact	Skin irritant.
Ingestion	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	Adverse symptoms may include: pain, watering or redness.
Inhalation	No specific data.
Skin contact	Adverse symptoms may include: irritation or redness.
Ingestion	No specific data.

Indication of any immediate medical attention needed

Notes to Physician	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Specific treatment	No specific treatment.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5: Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	Decomposition products may include the following materials: carbon dioxide, carbon monoxide, nitrogen oxides, phosphorus oxides, metal oxide/oxides.
Protective actions for fire-fighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Protective equipment for fire-fighters	Fire-fighters should wear appropriate protective equipment and self contained breathing apparatus (SCBA) with a full face piece operated in positive pressure mode.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
For emergency responders	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

Small spill	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large spill	Stop leak if without risk. Move containers from spill area. Approach release upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and section 13 for waste disposal.

Section 7: Handling and Storage

Precautions for safe handling

Protective measures	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	Eating, drinking and smoking should be prohibited in areas where this material is handled, stores and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also section 8 for additional information on hygiene measures.
Conditions for safe storage including any incompatibilities	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8: Exposure Controls/Personal Protection

Control parameters

Occupational exposure limits

None

Appropriate engineering controls	Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate technique should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation.
Respiratory	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Eyes/Face	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side shields.
Hands	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.

Skin/Body	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
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Section 9: Physical and Chemical Properties

Physical state	Liquid
Color	White
Odor	None Added
Odor threshold	Not available
pH	8.7
Melting Point	Not available
Boiling Point	Not available
Flash Point	Not available
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Lower and upper explosive (flammable) limits	Not available
Vapor pressure	Not available
Vapor density	Not available
Relative density	1.0347
Solubility	Partially soluble in cold water. Insoluble in hot water.
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available

Section 10: Stability and Reactivity

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability: Stable

Possibility of hazardous reactions: Under normal conditions, hazardous reactions will not occur.

Conditions to avoid: No specific data

Incompatible materials: No specific data.

Hazardous decomposition products: Under normal conditions, hazardous decomposition products should not be produced.

Section 11: Toxicological Information

Acute toxicity

Ingredient name	Result	Species	Dose	Exposure
tris(2-butoxyethyl) phosphate	LD50 Oral	Rat	3 g/kg	-

Irritation/Corrosion

Ingredient name	Result	Species	Score	Exposure	Observation
tris(2-butoxyethyl) phosphate	Eyes- mild irritant	Rabbit	-	24 hrs 500 mg	-
	Skin- mild irritant	Rabbit	-	24 hrs 500 mg	-

Sensitization

Not available

Mutagenicity

Not available

Carcinogenicity

Not available

Reproductive toxicity

Not available

Teratogenicity

Not available

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available

Information on the likely routes of exposure

Routes of entry anticipated: Dermal.

Routes of entry not anticipated: Oral, Inhalation.

Potential acute health effects

Eye contact	No known significant effects or critical hazards.
Inhalation	No known significant effects or critical hazards.
Skin contact	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	No specific data.
Inhalation	No specific data.
Skin contact	No specific data.
Ingestion	No specific data.

Delayed and immediate effects and chronic effects from short and long term exposure

Short term exposure

Potential immediate effects: Not available.

Potential delayed effects: Not available.

Long term exposure

Potential immediate effects: Not available.

Potential delayed effects: Not available.

Potential chronic health effects

Not available

General: No known significant effects or critical hazards.

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental effects: No known significant effects or critical hazards.

Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	88235.3 mg/kg

Section 12: Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
tris(2-butoxyethyl) phosphate	Acute LC50 11200 µg/l Fresh water	Fish - Pimephales promelas	96 hrs

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogP LogP _{ow}	BCF	Potential
tris(2-butoxyethyl) phosphate	3.75	5.8	low

Mobility in soil

Soil/water partition coefficient (K_{oc}): Not available

Other adverse effects: No known significant effects or critical hazards.

Section 13: Disposal considerations

Waste disposal

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14: Transport information

Regulatory info	UN number	Proper shipping name	Classes	PG	Environmental hazards	Additional info
DOT Classification	Not regulated	-	-	-	No	-
TDG Classification	Not regulated	-	-	-	No	-
Mexico Classification	Not regulated	-	-	-	No	-
ADR/RID Class	Not regulated	-	-	-	No	-
IMDG Class	Not regulated	-	-	-	No	-
IATA-DGR Class	Not regulated	-	-	-	No	-

Special precautions for user: **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not available

Section 15: Regulatory information

U.S. Federal regulations

TSCA 8(a) CDR PAIR: tris(2-butoxyethyl) phosphate; (2-methoxymethylethoxy) propanol

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

TSCA 8(c) calls for record of SAR: tris(2-butoxyethyl) phosphate Not determined.

Clean Water Act (CWA) 307: tetraamminezinc(2+) carbonate

Clean Water Act (CWA) 311: ammonia; potassium hydroxide

**Clean Air Act Section 112(b)
Hazardous Air Pollutants
(HAPs)** Listed

**Clean Air Act Section 602
Class I Substances** Not Listed

**Clean Air Act Section 602
Class II Substances** Not Listed

**DEA List I Chemicals
(Precursor Chemicals)** Not Listed

**DEA List II Chemicals
(Essential Chemicals)** Not Listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ Not applicable

SARA 311/312

Classification Not applicable

Composition/information on ingredients

Name	%	Fire Hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
tris(2-butoxyethyl) phosphate	1-3	no	no	no	yes	no

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	2-(2-ethoxyethoxy)ethanol	111-90-0	1-3
	tetraamminezinc(2+) carbonate	38714-47-5	≥1-<3
Supplier notification	2-(2-ethoxyethoxy)ethanol	111-90-0	1-3
	tetraamminezinc(2+) carbonate	38714-47-5	≥1-<3

SARA 313 notifications must not be detached from the SDS and any copying and redistribution and the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts: None of the components are listed.

New York: None of the components are listed.

New Jersey: The following components are listed: Zinc compounds; Glycol ethers

Pennsylvania: The following components are listed: Zinc compounds, glycol ethers

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not Listed

Montreal Protocol (Annexes A, B, C, E)

Not listed

Stockholm Convention on Persistent Organic Pollutants

Not listed

Rotterdam Convention on Prior Inform Consent (PIC)

Not listed

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed

International lists:

Australia inventory (AICS): Not determined.

Canada: Not determined.

China inventory (IECSC): Not determined.

Europe: Not determined.

Japan inventory: Not determined.

Malaysia: Not determined.

Korea inventory: Not determined.

New Zealand Inventory of Chemicals (NZIoC): Not determined.

Philippines inventory (PICCS): Not determined.

Taiwan: Not determined.

Section 16: Other information

Hazardous Material

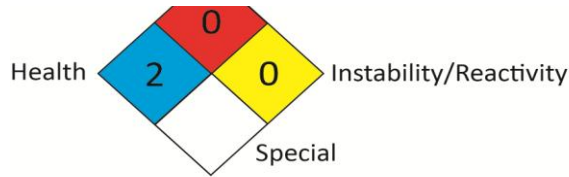
Information System (U.S.A.):

Health	0
Flammability	0
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J.J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

Association:



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Procedure used to derive the classification

Classification	Justification
Not classified.	

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist