

SAFETY DATA SHEET

Revision Date 26-July-2016

Revision Number 1a

1. Identification

Product Trade Name: Revive
Cat No.: XXXXX
Synonyms: YYYYYY
Application: Commercial laundry detergent additive.
Uses Advised Against No Information Available

Details of the supplier of the safety data sheet

Company
Applied Chemical Innovations
580 W. Cheyenne Ave
Suite # 70
North Las Vegas, NV 89030
chet.vo@aci-chem

Emergency Telephone Number
US 702-816-0915

2. Hazard(s) identification

Hazard Overview

May be harmful if swallowed. May cause eye irritation.

Precautionary Statements^[1]_[SEP]

Prevention^[1]_[SEP]

Wash face, hands and any exposed skin thoroughly after handling^[1]_[SEP]

Do not eat, drink or smoke when using this product

Wear protective gloves/protective clothing/eye protection

Inhalation^[1]_[SEP]

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing^[1]_[SEP]

Call a POISON CENTER or doctor/physician if you feel unwell^[1]_[SEP]

Skin^[1]_[SEP]

IF ON SKIN: Wash with plenty of soap and water^[1]_[SEP]

Call a POISON CENTER or doctor/physician if you feel unwell^[1]_[SEP]

If skin irritation occurs: Get medical advice/attention^[1]_[SEP]

Take off contaminated clothing and wash before reuse^[1]_[SEP]

Eyes

^[1]_[SEP] IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing

If eye irritation persists: Get medical advice/attention^[1]_[SEP]

Ingestion^[1]_[SEP]

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell^[1]_[SEP]

Rinse mouth^[1]_[SEP]

Storage

Store in a well-ventilated place. Keep container tightly closed.

Do not store in the presence of oxidants (hydrogen peroxide, bleach)

Disposal^[1]_[SEP]

Dispose of contents/container to an approved waste disposal plant^[1]_[SEP]

Hazards not otherwise classified (HNOC)^[1]_[SEP] None identified

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3. Composition / information on ingredients

Component	CAS Number	Weight %
Sodium iron(III) tetraamido-hexamethyl-phenyl macrocycle	895567-73-4	<1%
Water	7732-18-5	>99%

4. First-aid measures

Inhalation	Remove from exposure, lie down. Move to fresh air. If breathing is difficult give oxygen. If not breathing give artificial respiration. Get medical attention.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Obtain medical attention.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
Ingestion	Give at least 3-4 glasses of water, but do not induce vomiting. Obtain medical attention.
Most important symptoms/effects	No information available
Notes to Physician	The stomach acids should be sufficient to render the chemical inactive and it will pass through the system. Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media	Carbon dioxide (CO ₂). Dry chemical, chemical foam.
Unsuitable Extinguishing Media	No information available
Flash Point	No information available
Method	No information available
Autoignition Temperature	No information available
Explosion Limits	
Lower	No data available
Upper	No data available
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available
Special Hazards Arising from the Chemical	May react violently with high concentrations of hydrogen peroxide or bleach releasing oxygen and boiling water.
Hazardous Combustion Products	Carbon monoxide (CO) and carbon dioxide (CO ₂)
Protective Equipment and Precautions for Fire-Fighter	Wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

(Sodium iron(III) tetraamido-hexamethyl-phenyl macrocycle)	Health 1	Flammability 0	Instability 0	Physical hazards N/A
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6. Accidental release measures

Personal Precautions	Ensure adequate ventilation. Use appropriate protective equipment.
Environmental Precautions	See Section 12 for additional ecological information.
Methods for Containment and Clean Up	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/national regulations.

7. Handling and storage

Handling	Avoid contact with eyes, skin, or clothing. Wash hands after use. Launder contaminated clothing before reuse. Use with adequate ventilation.
Storage	Store away from hydrogen peroxide and other potential oxidizers. Store in a cool well ventilated area. Keep container closed when not in use.

8. Exposure controls/personal protection

Engineering Controls	Use in a well ventilated area. Local exhaust ventilation should be used in areas without good cross ventilation. Eyewash fountains and safety showers must be easily accessible.
<u>Personal Protective Equipment</u> Respiratory Protection	NIOSH-certified dust/mist respirator. (95%)
Skin and Body Protection	Wear appropriate protective gloves and clothing to prevent skin exposure.
Eye/face Protection	Chemical goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Customer is responsible for determining suitability of gloves, eyewear, respirator, and clothing for the work environment and other chemicals that the employee may normally be exposed to. Replace gloves at first signs of deterioration (hardening, cracking, softening, or swelling).

9. Physical and chemical properties

Physical State:	Liquid
Color:	Red-orange
Odor:	None
pH:	No information Available
Specific Gravity @ 20 C (Water=1):	N/A
Density @ 20 C (lbs./gallon):	No Information Available
Bulk Density @ 20 C (lbs/ft3):	No Information Available
Boiling Point/Range (F):	No Information Available
Boiling Point/Range (C):	No Information Available
Freezing Point/Range (F):	No Information Available
Freezing Point/Range (C):	No Information Available
Vapor Pressure @ 20 C (mmHg):	No Information Available

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Vapor Density (Air=1):	No Information Available
Percent Volatiles:	No Information Available
Evaporation Rate (Butyl Acetate=1):	No Information Available
Solubility in Water (g/100ml):	N/A
Solubility in Solvents (g/100ml):	N/A
Solubility in Sea Water (g/100ml):	N/A
VOCs (lbs./gallon):	No Information Available
Viscosity, Dynamic @ 20 C (centipoise):	No Information Available
Viscosity, Kinematic @ 20 C (centistokes):	No Information Available
Partition Coefficient/n-Octanol/Water:	No Information Available
Molecular Formula	Na C ₁₉ H ₂₂ N ₄ O ₄ Fe•xNaCl•yCH ₈ O
Molecular Weight (g/mole):	650 (approx.)

10. Stability and reactivity

Reactive Hazard	None known, based on information available
Stability	Stable.
Hazardous Polymerization:	Does Not Occur
Conditions to Avoid	Excess heat greater than 300 F
Incompatible Materials	Oxidizers like peroxides and bleach (hypochlorite).
Hazardous Decomposition Products	Could carbon monoxide (CO) and carbon dioxide (CO ₂)
Hazardous Reactions	None under normal processing

11. Toxicological information

Principle Route of Exposure	Eye or skin contact, inhalation.
Inhalation	May cause irritation
Skin Contact	No irritation observed
Eye Contact	May cause irritation
Ingestion	May cause irritation
Aggravated Medical Conditions	None observed.
Chronic Effects	No chronic effects observed.
Other Information	None known.
Toxicity Tests	EC ₅₀ - 238 mg/L for Sodium iron(III) tetraamido-hexamethyl-phenyl macrocycle (luminescent bacteria) Does not induce either oxidative stress or cytotoxicity in HaCaT cultured cells

Chemical Name	CAS-No	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium iron(III) tetraamido-hexamethyl-phenyl macrocycle	895567-73-4	Not available	Not available	Not available

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Primary Irritation Effect:	No information available
Carcinogenicity	No information available for Sodium iron(III) tetraamido-hexamethyl-phenyl macrocycle
Genotoxicity:	No information available
Endocrine Disruptor Information	No information available
Reproductive/Developmental Toxicity:	No information available

12. Ecological information

Mobility (Water/Soil/Air)	Soluble in water/not likely to be mobile in soil/non-volatile
Persistence/Degradability	Not expected to be persistent
Bio-accumulation	Not expected to be bioaccumulative
Ecotoxicological Information	
Acute Fish Toxicity:	No information available
Acute Crustaceans Toxicity:	No information available
Acute Algae Toxicity:	No information available
Chemical Fate Information	EC ₅₀ less than 238 mg/L for degradation products of Sodium iron(III) tetraamido-hexamethyl-phenyl macrocycle
Other Information	No information available

13. Disposal considerations

Disposal Method	Disposal should be made in accordance with federal, state, and local regulations.
Contaminated Packaging	If empty container retains product residues, all label precautions must be observed. Transport with all closures in place. Return for reuse or disposal according to national or local regulations.

14. Transport information

UN-Number DOT, ADN, IMDG, IATA	Not regulated
UN proper shipping name DOT, ADN, IMDG, IATA	Not regulated
Transport hazard class(es) DOT, ADN, IMDG, IATA	Class not regulated
Packing group DOT, IMDG, IATA not regulated	Not regulated

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15. Regulatory information

International Inventories

Component

Sodium iron(III) tetraamido-hexamethyl-phenyl macrocycle

TSCA

Yes

EPA SARA Title III Extremely Hazardous Substances

None of the chemicals are Section 302 hazards

EPA SARA (311,312) Hazard Class

By our hazard evaluation, this product is non-hazardous

EPA SARA (313) Chemicals

This product contains no chemicals (at level of 1% or greater) that are found on the 313 List of Toxic Chemicals.

EPA CERCLA/Superfund Reportable Spill Quantity For This Product

None of the chemicals are CERCLA hazards

EPA RCRA Hazardous Waste Classification

Not listed

California Proposition 65

None of the chemicals are listed

MA Right-to-Know Law

Not listed

NJ Right-to-Know Law

Not listed

PA Right-to-Know Law

Not listed

**Canadian Regulations
Canadian DSL Inventory**

Not listed

WHMIS Hazard Class

Not listed

16. Other information

Prepared byApplied Chemical Innovations
Email: chet.vo@aci-chem**Revision Date**

21-July-2016

Print Date

21-July-2016

Revision Summary

This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer Statement

The information provided on this 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text. The information given is not intended to relieve a recipient from its responsibility to determine the suitability of this information for their particular purposes, to comply with all laws and procedures regarding the safe use of these materials, and to use these materials in a safe manner.

*****End of SDS*****