Frontier Specialty Chemicals Inc.

Safety Data Sheet

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1. PRODUCT IDENTIFICATION OF SUBSTANCE/MIXTURE AND SUPPLIER INFORMATION

Product form: Solid

Product Name: Chlorin e4

CAS No.: 550-52-7

Formula: C33H36N4O4

FSCI Catalog #: C40967

Emergency Tel No: Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION---Label Information

Signal Word WARNING

Hazard Statement(s) H315: Causes skin irritation

H319: Causes serious eye irritation

H335: May cause respiratory irritation

General Risk: Avoid inhalation, contact with skin or eyes, and ingestion. Always use personal protective

Equipment when handling this compound. (Additional information may be included in SDS)

Precautionary Statements

P233-Keep container tightly closed.

P261-Avoid breathing dust/ fume/ gas/ vapors/ spray.

P264-Wash hands thoroughly after handling.

P274-Use only outdoors or in a well-ventilated area.

P280-Wear Impervious gloves/ protective clothing/ eye protection/ face protection.

P302-IF ON SKIN Wash with plenty of soap and water.

P304-IF INHALED Remove victim to fresh air and keep at rest in a comfortable position for breathing.

P305-IF IN EYES Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

P312-Call a POISON CENTER or doctor/physician if you feel unwell.

P313-IF exposed or concerned: Get medical advice/attention.

3. COMPOSITION / Information on INGREDIENTS

Product Name: Chlorin e4

CAS No.: 550-52-7

Formula: C33H36N4O4

Appearance: No data available

4. FIRST AID MEASURES

Inhalation: Remove to fresh air. In cases of serious discomfort, seek medical attention.

If not breathing, trained personnel should administer oxygen or artificial respiration.

Eye Contact: Flush with copious amounts of water for at least 20 minutes. Seek immediate medical

Attention.

Skin Contact: Remove contaminated clothing. Rinse affected area with copious amounts of water.

Rinse thoroughly. In case of skin damage or persistent irritation, seek immediate medical

attention. Show the physician the container details.

Ingestion: Call a physician or poison control center immediately. Induce vomiting only if instructed

to do so by medical personnel. Seek immediate medical attention.

5. FIRE FIGHTING MEASURES

Extinguishing Medium: Use firefighting measures which suit the environment and take into account other materials

which may be involved. Use carbon dioxide or dry powder for fires involving this material. In general, water-based extinguishers are not recommended for fires involving organic materials.

Protective Equipment: Wear self-contained breathing apparatus and protective clothing. Most compounds emit toxic

Gases when burning.

6. ACCIDENTAL RELEASE MEASURES

Personal Protection: Avoid inhalation or contact of spilled material with skin or clothing. Wear protective clothing.

Keep unprotected persons away.

Environmental

Protection:

Take precautions to ensure product does not contaminate the ground or enter the drainage

system.

Collection: Contain or absorb, as appropriate. Minimize dust generation, where applicable. Dispose

According to Section 13.

7. HANDLING AND STORAGE

Handling: Chemicals should be used only by those trained in handling potentially hazardous materials.

Impervious gloves, eye protection and protective clothing should be worn. Operations Should be carried out in efficient fume hood or equivalent system. Avoid breathing or dust,

Vapor, mist, or gas.

Storage: Store in a cool dry, well-ventilated area. Store in a tightly sealed container. Protect from

moisture, heat, ignition sources, and incompatible substances. Protect from direct light. See stability and reactivity for more details on incompatible substances if available.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Respiratory: Avoid inhalation of product. Handle in an efficient fume hood or equivalent system.

Keep unprotected persons away.

Eye: Avoid eye contact. Wear safety glasses, goggles or, for larger quantities, a full-face shield.

Protection: system.

Hands and Body: Avoid skin contact. Wear Impervious gloves and, for larger quantities, a full arm and

body protection. Wash hands thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: No data available

Boiling Point: Not specified

Melting Point: Not specified

Water Solubility: Not specified

Flash Point: No data available

Formula Weight: 552.663

Density: No data available

Lower Explosive Limit: No data available

Upper Explosive Limit: No data available

PEL: No data available

Auto Ignition Point: No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity:No data available10.2 Chemical stability:No data available10.3 Possibility of hazardous reactions:No data available10.4 Conditions to avoid:No data available10.5 Incompatible materials:No data available

10.6 Hazardous decomposition products Other decomposition products - No data available 10.7 Hazardous decomposition products formed under fire conditions. - No data available

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects: The full toxicological effects of this compound have not been studied However as a minimum precaution it should be considered to be harmful. Hazardous decomposition products may occur when this compound comes in contact with other chemicals, fire or water.

Acute toxicity: No data available

Skin corrosion/irritation: No data available

Ames test Result: No data available

TOXICOLOGICAL INFORMATION Continued

Carcinogenicity IARC: No data available

NTP: No data available

OSHA: No data available

Reproductive toxicity:No data available

Specific target organ toxicity:No data available

Single exposure Inhalation: No data available

Repeated exposure: No data available

Aspiration hazard: No data available

12. ECOLOGICAL EFFECTS

Take care to prevent chemicals from entering the ground, water bodies, or drainage systems.

13. DISPOSAL CONSIDERATIONS

Disposal should be carried out via an approved contractor according to all federal, state and local regulations.

14. TRANSPORT INFORMATION

UN Number: No data

Packing Group: No data

Hazard Class: No data

DOT: Ship Name: No data

Other Information: No data

15. REGULATORY INFORMATION

U.S. Federal regulations: None available

SARA 313 Reportable Chemicals

Form R – Reporting requirements Product name: CAS/313 Category Codes %

16. OTHER INFORMATION

The information on this Safety Data Sheet is correct to the best knowledge as of the date of publication. This information should be used only as a guide and is not a guarantee of any specific properties. All chemicals should be handled by qualified personnel using proper handling precautions. FSSI cannot accept liability for any loss, damage, or injury that results from the use of this chemical.

THIS SUBSTANCE IS FOR RESEARCH AND DEVELOPMENT PURPOSES ONLY.