



The Chemours Company
Pompton Lakes Works
2000 Cannonball Road
Pompton Lakes, NJ 07442

September 30, 2016

SENT VIA EMAIL PDF

Mr. Brian Salvo
New Jersey Department of Environmental Protection
Bureau of Surface Water Permitting
401 East State Street
P.O. Box 420
Trenton, New Jersey 08625-0420

**RE: Request for Approval of Chemical Addition for
Category BGR – General Remediation Clean-up Permit Authorization
NJPDES Permit No. NJG0251534
The Chemours Company FC, LLC
Pompton Lake Study Area Corrective Measures
Pompton Lakes Borough, Passaic County**

Dear Mr. Salvo:

The Chemours Company FC, LLC (Chemours) is submitting this request for approval of the use of chemical addition agents as part of the Pompton Lakes Study Area (PLSA) water treatment system under the New Jersey Pollutant Discharge Elimination System (NJPDES) Discharge to Surface Water permit, Category BGR – General Remediation Clean-up Permit Authorization (NJPDES Permit No. NJG0251534).

This request for approval of chemical addition is to improve treatment system performance. Due to variance in the influent water, chemical additions to the water treatment plant at the PLSA project are necessary to remove soluble mercury, copper and Total Organic Carbon (TOC) prior the discharge. The treatment plant designer and operator, Severson Environmental Services, Inc. (Severson), has conducted additional treatability studies to address these constituents and concluded that chemical addition to the existing treatment plant will be necessary prior to filtration.

Proposed Chemical Addition

Based upon the results of the treatability studies the below Table 1 summarizes the proposed chemicals to be used in the treatment process, and the estimated mass of each chemical. The Safety Data Sheets for each proposed chemical are attached to this letter.

Table 1: Summary of Proposed Chemical Addition at Chemours Pompton Lakes Uplands Water Treatment Plant

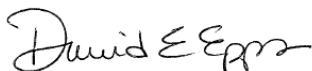
Chemical	Purpose	Form	Projected Dosage, mg/L	Estimated Usage, Lbs/Day¹
Ferric Sulfate (KEMIRA PIX-312)	Precipitation of heavy metals Precipitation of dissolved organic carbon	50% solution by weight	100-200 mg/L	6.7
Sodium Sulfide	Precipitation of trace heavy metals	10% solution by weight	1-2 mg/L	0.07
Powdered Activated Carbon (PAC)	Removal of dissolved organic carbon	Dry	100 mg/L	3.3
Polymer	Flocculation of solids to facilitate removal by settling and filtration	30% neat solution by weight	5-10 mg/L	0.2

Food-grade chemicals will be used to minimize the presence of toxic metals or organics in the chemicals. Dry powdered activated carbon (PAC) may also be added to ensure that the necessary TOC removals are achieved. Note that the PAC will be removed from the bottom of the Equalization Tank and through the downstream bag filters, prior to discharge to Pompton Lake.

The proposed polymer (Dixie 757) is the same polymer that was discussed in the initial Request for Authorization (RFA) for this project as part of the filter press dewatering in the hydraulic dredging phase of the project.

We would appreciate an expeditious review of this request as the remediation project is ongoing and water is currently being stored onsite to ensure that the appropriate effluent limitation are met prior to discharge. The volume of water that can be stored onsite is limited and thus approval of this package by Friday October 7, 2016 would be greatly appreciated. Please contact me at (973) 492-7703 or Alicia Lyding at (973) 492-7702 if you should have any questions regarding this package.

Sincerely,



David E. Epps, P.G.
Project Director, Pompton Lakes Works
Corporate Remediation Group

¹ Mass used at an estimated daily flow of 4,000 gals/day at maximum estimated dosage

Cc: PLW Central file
Alicia Lyding, HDR
Anthony Cinque, NJDEP
Perry Katz, USEPA

Safety Data Sheets

Ferric Sulfate



Univar USA Inc Safety Data Sheet

SDS No:

Version No:

Order No:

3075 Highland Pkwy, Ste 200, Downers Grove, IL 60515
(425) 889 3400

Emergency Assistance

For emergency assistance involving chemicals call
Chemtrec - (800) 424-9300



SAFETY DATA SHEET

KEMIRA PIX-312

Ref. /US/EN

Revision Date: 06/26/2015

Previous date: 02/11/2015

Print Date:10/21/2015

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product information

Product name
KEMIRA PIX-312

Recommended use of the chemical and restrictions on use

Use of the Substance/Mixture

Water treatment chemical

Recommended restrictions on use

There are no uses advised against.

Supplier's details

Kemira Water Solutions, Inc.
1000 Parkwood Circle, Suite 500
30339 Atlanta USA
Telephone+18635335990, Telefax. +18635337077

HEAD OFFICE
Kemira Oyj
P.O. Box 330
00101 HELSINKI
FINLAND
Telephone +358108611 Telefax +358108621124

Emergency telephone number

Carechem 24 International: +44 (0) 1235 239 670
CHEMTREC: 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Corrosive to metals; Category 1; May be corrosive to metals.;
Acute toxicity (Oral); Category 4; Harmful if swallowed.;
Skin corrosion/irritation; Category 2; Causes skin irritation.;
Serious eye damage; Category 1; Causes serious eye damage.;



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GHS-Labeling

Hazard pictograms



Signal word

: Danger

Hazard statements

: **Hazard statements:**

H290 May be corrosive to metals.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.

Precautionary statements

: **Prevention:**

P234 Keep only in original container.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash face, hands and any exposed skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P390 Absorb spillage to prevent material damage.
P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
P330 Rinse mouth.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P321 Specific treatment (see supplemental first aid instructions on this label).
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or



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doctor/ physician.

Storage:

P405

Store locked up.

P406

Store in corrosive resistant container with a resistant inner liner.

Disposal:

P501

Dispose of contents/container as special waste in compliance with local and national regulations.

Hazardous components which must be listed on the label:

- 10028-22-5 Diiron tris(sulphate)

Other hazards which do not result in classification

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances /Mixtures

Hazardous components

Chemical Name	CAS-No.	Concentration[%]
Diiron tris(sulphate)	10028-22-5	60 - 80 %

Further information

This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

For the full text of the H-Statements mentioned in this Section, see Section 16.

For the full text of the R-phrases mentioned in this Section, see Section 16.



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4. FIRST AID MEASURES

Description of first aid measures

Inhalation

If breathing is difficult, remove to fresh air and provide oxygen. If not breathing, give artificial respiration. Seek medical attention if cough or other symptoms develop.

Skin contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if irritation develops and persists.

Eye contact

Flush eyes with water at least 15 minutes. Get medical attention if eye irritation develops or persists.

Ingestion

Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Drink 1 or 2 glasses of water. Obtain medical attention.

Most important symptoms and effects, both acute and delayed

5. FIREFIGHTING MEASURES

Suitable extinguishing media

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

Special hazards arising from the substance or mixture

Not combustible. Thermal decomposition products:
Sulphur oxides, hydrogen sulfide

Special protective actions for fire-fighters

Use NIOSH/MSHA approved respiratory protection.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear personal protective equipment.

Environmental precautions

Should not be released into the soil, surface water or ground water system. Must be disposed of in accordance with local and national regulations.

Methods and materials for containment and cleaning up

Small amounts:

Absorb with materials such as; Clay. Neutralize with lime or soda.



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Large amounts:

In case of large spillage, contain by damming up. Absorb with materials such as; Clay. Dilute residues with water and then neutralize with lime or limestone powder.

7. HANDLING AND STORAGE

Precautions for safe handling

Wear personal protective equipment. Wash contact areas after handling. Prevent eye and skin contact.

Conditions for safe storage, including any incompatibilities

Keep at temperatures between 10 - 30 °C.

Keep containers tightly closed in a cool, well-ventilated place.

Materials for packaging

Suitable material: butyl-rubber, plastic, Stainless steel

Unsuitable material: Metals

Materials to avoid:

Carbon steel, brass, mineral acids, Bases

Storage stability:

Storage period 12 Months

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Form of exposure	Control parameters	Update	Basis
Sulphuric acid	7664-93-9	TWA	Thoracic fraction	0.2 mg/m ³	2007-01-01	ACGIH
		TWA		1 mg/m ³	2005-09-01	NIOSH REL
Diiron tris(sulphate)	10028-22-5			1 mg/m ³		
				1 mg/m ³		
		TWA		0.1 mg/m ³		



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Appropriate engineering controls

Ensure adequate ventilation. Ensure that eyewash stations and safety showers are close to the workstation location.

When using do not eat, drink or smoke.

Individual protection measures, such as personal protective equipment

Respiratory protection

Where exposures are below the established exposure limit, no respiratory protection is required. Where exposures exceed the established exposure limits, use respiratory protection recommended for the material and level of exposure. Under conditions of misting or contact with head gases, respiratory protection may be needed. Consider respirator warning properties before use.

With limited contact use an appropriate chemical cartridge respirator with acid gas cartridges. When cleaning, decontaminating or performing maintenance on tanks, containers, piping systems and accessories, and in any other situations where airborne contaminants and/or dust could be generated, use protective equipment to protect against ingestion or inhalation. HEPA or air supplied respirator, full protective coveralls with head cover, gloves, and boots or chemical suits, and boots are suggested.

Hand protection

Glove material: Neoprene, Wear protective gloves.

Skin and body protection

Wear as appropriate: Protective clothing. Boots. Lab coat

Eye protection

Tightly fitting safety goggles or face-shield.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	, liquid
Colour	red, brown
Odour	acidic
Odour Threshold	not determined
pH	< 2
Freezing point :	No data available
Initial boiling point and boiling	



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range	
Flash point	No data available
Evaporation rate	No data available
Explosive properties:	
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapour pressure	No data available
Relative vapour density	No data available
Density	No data available
Relative density	No data available
Bulk density	No data available
Solubility(ies):	
Water solubility	soluble
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity:	
Viscosity, dynamic	No data available
Viscosity, kinematic	No data available
Volatile organic content (VOC)	Not applicable

10. STABILITY AND REACTIVITY

Reactivity

Chemical stability

Possibility of hazardous reactions

Hazardous reactions:

Hazardous polymerisation does not occur.
Stable under recommended storage conditions.



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Skin corrosion/irritation	Diiron tris(sulphate): Rabbit Result: No skin irritation /OECD Test Guideline 404 Conclusion: Moistened solid is expected to be irritant as a consequence of low pH.
Serious eye damage/eye irritation	Diiron tris(sulphate): Rabbit Result: Causes serious eye damage. /OECD Test Guideline 405 Remarks: Read-across (Analogy), 7758-94-3, dry substance
Respiratory or skin sensitisation	
Skin sensitisation	Diiron tris(sulphate): Conclusion: According to experience sensitization is not expected.
Germ cell mutagenicity	
Genotoxicity in vivo	Diiron tris(sulphate): Result: negative
Carcinogenicity	
Carcinogenicity	Diiron tris(sulphate): /Rat/Oral/2 years Remarks:Information given is based on data obtained from similar substances. Not believed to be a carcinogen. Long-term test
Reproductive toxicity	
Toxicity for reproduction	Diiron tris(sulphate): Reproductive effects/Rat/>/500 mg/kg Remarks: Read-across (Analogy) Diiron tris(sulphate): Developmental toxicity test/Rat/>/1,000 mg/kg Remarks: Read-across (Analogy) Conclusion: In animal studies, did not interfere with reproduction.
Teratogenicity	Diiron tris(sulphate): Rat/Oral/>/1,000 mg/kg Conclusion: Did not show teratogenic effects in animal experiments., Information given is based on data obtained from similar substances.



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12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Aquatic toxicity

LC50/24 h/Gambusia affinis (Mosquito fish): 37.2 mg/l

LC50/96 h/Gambusia affinis (Mosquito fish): 37.2 mg/l

/7 d/Green algae (Selenastrum capricornutum): 10 mg/l

Diiron tris(sulphate):

LC50/96 h/Oncorhynchus mykiss (rainbow trout): > 100 mg/l

NOEC/90 d/Oncorhynchus kisutch (Coho salmon): > 1 mg/l

EC50/48 h/Daphnia (water flea): 82.8 mg/l

NOEC/21 d/Daphnia magna (Water flea): > 1 mg/l

The compound is considered to have no long term effects in aquatic systems due to the rapid formation of insoluble hydroxides.

Toxicity to other organisms

Persistence and degradability

Biological degradability:

Diiron tris(sulphate):

The methods for determining the biological degradability are not applicable to inorganic substances.

Bioaccumulative potential

Partition coefficient: n-octanol/water: No data available

Diiron tris(sulphate):

Does not bioaccumulate.

Partition coefficient: n-octanol/water: Not applicable, inorganic compound

Mobility in soil

Water solubility: soluble

Other adverse effects

May lower the pH of water and thus be harmful to aquatic organisms.



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13. DISPOSAL CONSIDERATIONS

Product	Must be disposed of as hazardous waste.
Contaminated packaging	Must be disposed of in accordance with local and national regulations.

14. TRANSPORT INFORMATION

UN number 3264

Land transport

DOT:

Description of the goods: UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Ferric sulfate)

Proper shipping name

Class: 8

Packaging group: III

DOT-Labels 8

Reportable quantity Ferric sulfate

Sea transport

IMDG:

Description of the goods:

UN proper shipping name UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (FERRIC SULFATE)

Class: 8

Packaging group: III

IMDG-Labels: 8

Air transport

ICAO/IATA:

Description of the goods:

UN proper shipping name UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Ferric sulfate)

Class: 8

Packaging group: III

ICAO-Labels: 8

Special precautions for user

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Title III Section 311 Categories

Immediate (Acute) Health Effects: Yes;



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Delayed (Chronic) Health Effects: No;
Fire Hazard: No;
Sudden Release Of Pressure Hazard: No;
Reactivity Hazard: No;

SARA 313 - Specific Toxic Chemical Listings

Sulfuric acid (7664-93-9)

OSHA a. United States Occupational Safety and Health Administration substances, 29 CFR 1910.1000, Sub Part Z.

CERCLA Hazardous substance (Reportable Quantities)

CERCLA Hazardous substance (Reportable Quantities)

Diiron tris(sulphate) (10028-22-5)

1,000 lb

Sulfuric acid (7664-93-9)

1,000 lb

Diiron tris(sulphate) (10028-22-5)

California Proposition 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

None Present ()

Remarks: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Other regulations

: No restrictions identified other than those already covered in regulations.

: None

Notification status

: All components of this product are included in the United States TSCA Chemical Inventory or are not required to be listed on the United States TSCA Chemical Inventory.

: All components of this product are included in the Canada Domestic Substance List (DSL) or are not required to be listed on the Canada Domestic Substance List (DSL).



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- : All components of this product are included in the Australian Inventory of Chemical Substances (AICS) or are not required to be listed on the Australian Inventory of Chemical Substances (AICS).
- : All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.
- : All components of this product are included in the Korean (ECL) inventory or are not required to be listed on the Korean (ECL) inventory.
- : All components of this product are included on the Philippine (PICCS) inventory or are not required to be listed on the Philippine (PICCS) inventory.
- : All components of this product are included on the Japanese (ENCS) inventory or are not required to be listed on the Japanese (ENCS) inventory.
- : All components of this product are included in the European Inventory of Existing Chemical Substances (EINECS) or are not required to be listed on EINECS.
- : All components of this product are included in the New Zealand inventory (NZIoC) or are not required to be listed on the New Zealand inventory(NZIoC).

16. OTHER INFORMATION

HMIS Rating

Health: 3
Flammability: 0
Reactivity: 0

NFPA Rating

Health: 3
Fire: 0
Reactivity: 0

Training advice

Read the safety data sheet before using the product.

Further information

The information provided in 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 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



SAFETY DATA SHEET

KEMIRA PIX-312

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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.

Sources of key data used to compile the Safety Data Sheet

Regulations, databases, literature, own tests.

Additions, Deletions, Revisions

Relevant changes have been marked with vertical lines.

Univar USA Inc Safety Data Sheet

For Additional Information contact SDS Coordinator during business hours, Pacific time: (425) 889-3400

Notice

Univar USA Inc. ("Univar") expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.

Do not use ingredient information and/or ingredient percentages in this SDS as a product specification. For product specification information refer to a product specification sheet and/or a certificate of analysis. These can be obtained from your local Univar sales office.

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Univar makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Univar's control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance upon, information contained herein.

This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process

Sodium Sulfide



Univar USA Inc Safety Data Sheet

SDS No:

Version No:

Order No:

3075 Highland Pkwy, Ste 200, Downers Grove, IL 60515
(425) 889 3400

Emergency Assistance

For emergency assistance involving chemicals call
Chemtrec - (800) 424-9300

COMPANY IDENTITY: Univar
PRODUCT IDENTITY: BLEND SODIUM SULFIDE 5-20% SOLUTION

SDS DATE: 05/06/2014
REPLACES: 10/14/2009

SAFETY DATA SHEET

This Safety Data Sheet conforms to ANSI Z400.5, and to the format requirements of the Global Harmonizing System.
THIS SDS COMPLIES WITH 29 CFR 1910.1200 (HAZARD COMMUNICATION STANDARD)
IMPORTANT: Read this SDS before handling & disposing of this product.
Pass this information on to employees, customers, & users of this product.

SECTION 1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

PRODUCT IDENTITY: BLEND SODIUM SULFIDE 5-20% SOLUTION
SYNONYM: Sodium Sulfide Hydrated Solution
PRODUCT USES: Chemical Processing
SDS NUMBER: CDS-1363
COMPANY IDENTITY: Univar
COMPANY ADDRESS: 17425 NE Union Hill Road
COMPANY CITY: Redmond, WA 98052
COMPANY PHONE: 1-425-889-3400
EMERGENCY PHONES: CHEMTREC: 1-800-424-9300 (USA)
CANUTEC: 1-613-996-6666 (CANADA)

SECTION 2. HAZARDS IDENTIFICATION

DANGER!!!

2.1 HAZARD STATEMENTS: (CAT = Hazard Category)

(H200s) PHYSICAL: Corrosive To Metals:
H290 MAY BE CORROSIVE TO METALS.(CAT:1)
(H300s) HEALTH: Skin Corrosion/Irritation:
H314 CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.(CAT:1)
(H300s) HEALTH: Acute Toxicity, Inhalation:
H332 HARMFUL IF INHALED.(CAT:4)



2.2 PRECAUTIONARY STATEMENTS:

P100s = General, P200s = Prevention, P300s = Response, P400s = Storage, P500s = Disposal

P234 Keep only in original container.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P262 Do not get in eyes, on skin, or on clothing.
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+361+353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse SKIN with water/shower.
P304+340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.
P363 Wash contaminated clothing before reuse.
P390 Absorb spillage to prevent material damage.
P404 Store in a closed container.
P405 Store locked up.
P501 Dispose of contents/container to appropriate waste site or reclaimer in accordance with local and national regulations.

SEE SECTIONS 8, 11 & 12 FOR TOXICOLOGICAL INFORMATION.

COMPANY IDENTITY: Univar
PRODUCT IDENTITY: BLEND SODIUM SULFIDE 5-20% SOLUTION

SDS DATE: 05/06/2014
REPLACES: 10/14/2009

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MATERIAL	CAS#	EINECS#	WT %
Water	7732-18-5	231-791-2	85-95
Sodium Sulfide	1313-82-2	-	3-15
Sodium Carbonate	497-19-8	-	0- 1
Sodium Hydrogen Sulfide	16721-80-5	-	0- 1

TRACE COMPONENTS: Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, reproductive toxins, respiratory tract mutagens, and sensitizers). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents, and Canadian Hazardous Materials Identification System Standard (CPR 4).

SECTION 4. FIRST AID MEASURES

- 4.1 MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE & CHRONIC:
See Section 11 for Symptoms/Effects (acute & chronic).
- 4.2 EYE CONTACT:
For eyes, flush with plenty of water for 15 minutes & get immediate medical attention.
- 4.3 SKIN CONTACT:
In case of contact with skin immediately remove contaminated clothing.
Wash thoroughly with soap & water. Get medical attention if symptoms develop. Wash contaminated clothing before reuse.
- 4.4 INHALATION:
After high vapor exposure, remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, trained personnel should immediately begin artificial respiration. If the heart has stopped, trained personnel should immediately begin cardiopulmonary resuscitation (CPR).
- 4.5 SWALLOWING:
Rinse mouth. GET MEDICAL ATTENTION IMMEDIATELY. Do NOT give liquids to an unconscious or convulsing person.

SECTION 5. FIRE FIGHTING MEASURES

- 5.1 FIRE & EXPLOSION PREVENTIVE MEASURES:
Isolate from oxidizers, extreme heat and open flame.
- 5.2 SUITABLE (& UNSUITABLE) EXTINGUISHING MEDIA:
Use dry powder, foam, carbon dioxide, or water spray extinguishing media.
Do not use water jet.
- 5.3 SPECIAL PROTECTIVE EQUIPMENT & PRECAUTIONS FOR FIRE FIGHTERS:
Water spray may be ineffective on fire but can protect fire-fighters & cool closed containers. Use fog nozzles if water is used.
Do not enter confined fire-space without full bunker gear.
(Helmet with face shield, bunker coats, gloves & rubber boots).
- 5.4 SPECIFIC HAZARDS OF CHEMICAL & HAZARDOUS COMBUSTION PRODUCTS:
Noncombustible.
Closed containers may explode if exposed to extreme heat.
Applying to hot surfaces requires special precautions.
Contact with acids will liberate flammable & poisonous Hydrogen Sulfide gas.

COMPANY IDENTITY: Univar
PRODUCT IDENTITY: BLEND SODIUM SULFIDE 5-20% SOLUTION

SDS DATE: 05/06/2014
REPLACES: 10/14/2009

SECTION 6. ACCIDENTAL RELEASE MEASURES

- 6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT & EMERGENCY PROCEDURES:
Keep unprotected personnel away. Wear appropriate personal protective equipment given in Section 8.
- 6.2 ENVIRONMENTAL PRECAUTIONS:
Keep from entering storm sewers and ditches which lead to waterways.
- 6.3 METHODS & MATERIAL FOR CONTAINMENT & CLEAN-UP:
Stop spill at source. Dike and contain.
Collect leaking & spilled liquid in sealable containers as far as possible.

SECTION 7. HANDLING AND STORAGE

- 7.1 PRECAUTIONS FOR SAFE HANDLING:
Use only with adequate ventilation. Wear OSHA Standard goggles or face shield. Consult Safety Equipment Supplier. Wear goggles, face shield, gloves, apron & footwear impervious to material. Wash clothing before reuse.
- 7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:
Isolate from strong oxidants. Do not store above 49 C/120 F.
Keep container tightly closed & upright when not in use to prevent leakage.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 EXPOSURE LIMITS:

MATERIAL	CAS#	EINECS#	TWA (OSHA)	TLV (ACGIH)
Water	7732-18-5	231-791-2	None Known	None Known
Sodium Sulfide	1313-84-4	-	None Known	None Known
Sodium Carbonate	497-19-8	-	None Known	None Known
Sodium Hydrogen Sulfide	16721-80-5	-	None Known	None Known

This product contains no EPA Hazardous Air Pollutants (HAP) in amounts > 0.1%.

8.2 APPROPRIATE ENGINEERING CONTROLS:

RESPIRATORY EXPOSURE CONTROLS

A respiratory protection program that meets OSHA 29 CFR 1910.134 and ANSI Z86.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

VENTILATION

LOCAL EXHAUST: Necessary MECHANICAL (GENERAL): Acceptable
SPECIAL: None OTHER: None
Please refer to ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

8.3 INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT:

PERSONAL PROTECTIONS:

Wear OSHA Standard goggles or face shield. Consult Safety Equipment Supplier. Wear goggles, face shield, gloves, apron & footwear impervious to material. Wash clothing before reuse.

WORK & HYGIENIC PRACTICES:

Provide readily accessible eye wash stations & safety showers.
Wash at end of each workshift & before eating, smoking or using the toilet.
Promptly remove clothing that becomes contaminated. Destroy contaminated leather articles. Launder or discard contaminated clothing.

COMPANY IDENTITY: Univar
PRODUCT IDENTITY: BLEND SODIUM SULFIDE 5-20% SOLUTION

SDS DATE: 05/06/2014
REPLACES: 10/14/2009

SECTION 9. PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE:	Liquid, Clear, Water-White
ODOR:	Odor of rotten eggs (Hydrogen Sulfide)
ODOR THRESHOLD:	Not Available
pH (Neutrality):	Not Available
MELTING POINT/FREEZING POINT:	Not Available
BOILING RANGE (IBP,50%,Dry Point):	> 100 C / > 212 F
FLASH POINT (TEST METHOD):	Not Applicable
EVAPORATION RATE (n-Butyl Acetate=1):	Not Applicable
FLAMMABILITY CLASSIFICATION:	Non-Combustible
LOWER FLAMMABLE LIMIT IN AIR (% by vol):	Not Applicable
UPPER FLAMMABLE LIMIT IN AIR (% by vol):	Not Available
VAPOR PRESSURE (mm of Hg)@20 C	17.5
VAPOR DENSITY (air=1):	0.670
GRAVITY @ 68/68 F / 20/20 C:	
DENSITY:	1.088
SPECIFIC GRAVITY (Water=1):	1.098
POUNDS/GALLON:	9.15
WATER SOLUBILITY:	Appreciable
PARTITION COEFFICIENT (n-Octane/Water):	Not Available
AUTO IGNITION TEMPERATURE:	Not Applicable
DECOMPOSITION TEMPERATURE:	Not Available
VOCs (>0.044 Lbs/Sq In) :	0.0 Vol% /0.0 g/L / 0.000 Lbs/Gal
TOTAL VOC'S (TVOC)*:	0.0 Vol% /0.0 g/L / 0.000 Lbs/Gal
NONEXEMPT VOC'S (CVOC)*:	0.0 Vol% /0.0 g/L / 0.000 Lbs/Gal
HAZARDOUS AIR POLLUTANTS (HAPS):	0.0 Wt% /0.0 g/L / 0.000 Lbs/Gal
NONEXEMPT VOC PARTIAL PRESSURE (mm of Hg @ 20 C)	0.0
VISCOSITY @ 20 C (ASTM D445):	Not Available

* Using CARB (California Air Resources Board Rules).

SECTION 10. STABILITY & REACTIVITY

- 10.1 REACTIVITY & CHEMICAL STABILITY:
Stable under normal conditions, no hazardous reactions when kept from incompatibles.
Darkens upon exposure to light or air.
- 10.2 POSSIBILITY OF HAZARDOUS REACTIONS & CONDITIONS TO AVOID:
Isolate from extreme heat and open flame.
- 10.3 INCOMPATIBLE MATERIALS:
Isolate from oxidizers.
- 10.4 HAZARDOUS DECOMPOSITION PRODUCTS:
Sodium Oxide, Sodium Hydroxide, and Hydrogen Sulfide from heating.
- 10.5 HAZARDOUS POLYMERIZATION:
Will not occur.

COMPANY IDENTITY: Univar
PRODUCT IDENTITY: BLEND SODIUM SULFIDE 5-20% SOLUTION

SDS DATE: 05/06/2014
REPLACES: 10/14/2009

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 ACUTE HAZARDS

11.11 EYE & SKIN CONTACT:

Primary irritation to skin, defatting, dermatitis.
Primary irritation to eyes, redness, tearing, blurred vision.
Liquid causes eye irritation and possible burns. Wash thoroughly after handling.

11.12 INHALATION:

Anesthetic. Irritates respiratory tract. Acute overexposure can cause serious nervous system depression. Vapor harmful.

11.13 SWALLOWING:

Swallowing can cause abdominal irritation, nausea, vomiting & diarrhea.

11.2 SUBCHRONIC HAZARDS/CONDITIONS AGGRAVATED

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Pre-existing disorders of any target organs mentioned in this SDS can be aggravated by over-exposure by routes of entry to components of this product. Persons with these disorders should avoid use of this product.

11.3 CHRONIC HAZARDS

11.31 CANCER, REPRODUCTIVE & OTHER CHRONIC HAZARDS:

This product has no carcinogens listed by IARC, NTP, NIOSH, OSHA or ACGIH, as of this date, greater or equal to 0.1%.

11.32 TARGET ORGANS: May cause damage to target organs, based on animal data.

11.33 IRRITANCY: Irritating to contaminated tissue.

11.34 SENSITIZATION: No component is known as a sensitizer.

11.35 MUTAGENICITY: No known reports of mutagenic effects in humans.

11.36 EMBRYOTOXICITY: No known reports of embryotoxic effects in humans.

11.37 TERATOGENICITY: No known reports of teratogenic effects in humans.

11.38 REPRODUCTIVE TOXICITY: No known reports of reproductive effects in humans.

A MUTAGEN is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate across generational lines. An EMBRYOTOXIN is a chemical which causes damage to a developing embryo (such as: within the first 8 weeks of pregnancy in humans), but the damage does not propagate across generational lines. A TERATOGEN is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A REPRODUCTIVE TOXIN is any substance which interferes in any way with the reproductive process.

11.4 MAMMALIAN TOXICITY INFORMATION

No mammalian information is available on this product.

COMPANY IDENTITY: Univar
PRODUCT IDENTITY: BLEND SODIUM SULFIDE 5-20% SOLUTION

SDS DATE: 05/06/2014
REPLACES: 10/14/2009

SECTION 12. ECOLOGICAL INFORMATION

12.1 ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

12.2 EFFECT OF MATERIAL ON PLANTS AND ANIMALS:

This product may be harmful or fatal to plant and animal life if released into the environment. Refer to Section 11 (Toxicological Information) for further data on the effects of this product's components on test animals.

12.3 EFFECT OF MATERIAL ON AQUATIC LIFE:

No aquatic environmental information is available on this product.

12.4 MOBILITY IN SOIL

Mobility of this material has not been determined.

12.5 DEGRADABILITY

This product is completely biodegradable.

12.6 ACCUMULATION

Bioaccumulation of this product has not been determined.

SECTION 13. DISPOSAL CONSIDERATIONS

The generation of waste should be avoided or minimized wherever possible. 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 and liners may retain some product residues. Vapor from some product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Processing, use or contamination may change the waste disposal requirements. Do not dispose of on land, in surface waters, or in storm drains. Waste should be recycled or disposed of in accordance with regulations. Large amounts should be collected for reuse or consigned to licensed hazardous waste haulers for disposal. **ALL DISPOSAL MUST BE IN ACCORDANCE WITH ALL FEDERAL, STATE, PROVINCIAL, AND LOCAL REGULATIONS. IF IN DOUBT, CONTACT PROPER AGENCIES.**

SECTION 14. TRANSPORT INFORMATION

MARINE POLLUTANT: No
DOT/TDG SHIP NAME: UN1849, Sodium sulfide, hydrated, solution, 8, PG-II
DRUM LABEL: Corrosive (8)
IATA / ICAO: UN1849, Sodium sulfide, hydrated, solution, 8, PG-II
IMO / IMDG: UN1849, Sodium sulfide, hydrated, solution, 8, PG-II
EMERGENCY RESPONSE GUIDEBOOK NUMBER: 153

SECTION 15. REGULATORY INFORMATION

15.1 EPA REGULATION:
SARA SECTION 311/312 HAZARDS: Acute Health



All components of this product are on the TSCA list.
SARA Title III Section 313 Supplier Notification
This product contains the indicated <*> toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning & Community Right-To-Know Act of 1986 & of 40 CFR 372. This information must be included in all MSDSs that are copied and distributed for this material.

COMPANY IDENTITY: Univar
PRODUCT IDENTITY: BLEND SODIUM SULFIDE 5-20% SOLUTION

SDS DATE: 05/06/2014
REPLACES: 10/14/2009

SECTION 15. REGULATORY INFORMATION (CONTINUED)

15.2 STATE REGULATIONS:

THIS PRODUCT MEETS REQUIREMENTS OF SOUTHERN
CALIFORNIA AQMD RULE 443.1 & SIMILAR REGULATIONS

CALIFORNIA SAFE DRINKING WATER & TOXIC ENFORCEMENT ACT (PROPOSITION 65):

This product contains no chemicals known to the State of California
to cause cancer or reproductive toxicity.

15.3 INTERNATIONAL REGULATIONS

The identified components of this product are listed on the chemical inventories
of the following countries:

Australia (AICS), Canada (DSL or NDSL), China (IECSC), Europe (EINECS, ELINCS),
Japan (METI/CSCL, MHLW/ISHL), South Korea (KECI), New Zealand (NZIoC),
Philippines (PICCS), Switzerland (SWISS), Taiwan (NECSI), USA (TSCA).

15.4 CANADA: WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

D2B: Irritating to skin / eyes.

This product has been classified in accordance with hazard criteria of the Controlled
Products Regulations (CPR) and the SDS contains all information required by the CPR.

SECTION 16. OTHER INFORMATION

16.1 HAZARD RATINGS:

HEALTH (NFPA): 2, HEALTH (HMIS): 2, FLAMMABILITY: 0, PHYSICAL HAZARD: 1
(Personal Protection Rating to be supplied by user based on use conditions.)
This information is intended solely for the use of individuals
trained in the NFPA & HMIS hazard rating systems.

16.2 EMPLOYEE TRAINING

See Section 2 for Risk & Safety Statements. Employees should be made aware
of all hazards of this material (as stated in this SDS) before handling it.

16.3 SDS DATE: 05/06/2014

Univar USA Inc Safety Data Sheet

For Additional Information contact SDS Coordinator during business hours, Pacific time: (425) 889-3400

Notice

Univar USA Inc. ("Univar") expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.

Do not use ingredient information and/or ingredient percentages in this SDS as a product specification. For product specification information refer to a product specification sheet and/or a certificate of analysis. These can be obtained from your local Univar sales office.

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Univar makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Univar's control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance upon, information contained herein.

This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process

Powdered Activated Carbon

POWDERED ACTIVATED CARBON FHJ 300, FHJ 400

Characteristics:

FHJ is a powdered activated carbon. Produced from select grades of bituminous coal and thermally activated under carefully controlled conditions, the carbon is characterized by a high surface area and superior pore volume. FHJ 300 and 400 is an ideal product for many purification applications including the treatment of potable water, removal of taste, odor and organic contaminants, and chemical depolarization, etc. FHJ is ANSI/NSF standard 61 certified and meets AWWA B600-90 standards.

Specifications

	FHJ 300	FHJ 400
US Mesh Size	325	325
Percentage thru 100 mesh	99% min.	99% min.
Percentage thru 200 mesh	95% min.	95% min.
Percentage thru 325 mesh	90% min.	90% min.
Iodine number mg/g	600 min.	800 min.
Moisture wt.% as packed	4% max.	4% max.

Physical Properties *

Total pore volume, cc/g	0.75 min.	0.85 min.
Total surface area, m ² /g	650 min.	850 min.

- Physical properties are for general information and are not to be construed as purchased specifications.

Commercial Information

Type FHJ is delivered via bulk pneumatic tank truck or 1000 lb super-bags or 55 lb bags. Other packaging is available upon request.



CHEM-TRADE INTERNATIONAL, INC.

325 MEADOWLANDS BLVD., SUITE 1
WASHINGTON, PA. 15301

Telephone 724-745-1405
Fax 724-745-0995

SAFETY DATA SHEET

Revision #:12
Revision date: April 22, 2015

Identity: Bituminous Coal Based Activated Carbon
(For all virgin coal based carbons)

Section 1 - MANUFACTURER

Chem-Trade International, Inc. 750 Frelinghuysen Ave. Newark, NJ 07114 Tel: 724-745-1405,	Fax: 732-745-0995	Corporate office: 325 Meadowlands Blvd. Washington, PA 15301
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Section 2 – INGREDIENTS

Component	% by weight	Oral LD50	CAS number	TLV values
Activated carbon	100	>10 g/kg	7440-44-0	N/A

Section 3- HAZARDS IDENTIFICATION

CAUTION: Wet activated carbon adsorbs oxygen from air. Therefore, the atmosphere in a vessel or confined space may be deficient in oxygen and very hazardous to workers after it is loaded with activated carbon. Before anyone enters such a space, procedures should be followed to ensure ample oxygen availability and to comply with all governmental regulations.

Potential Health Effects: Prolonged or repeated exposure to dust may cause eye and respiratory tract irritation.

Section 4 – PHYSICAL/CHEMICAL CHARACTERISTICS

Appearance:	Powder, granular, pellet
Color:	black, dark grey
Odor:	odorless
Ignition temp. ASTM D4366:	300 °C
Boiling Point:	4000 °C
Bulk density (H ₂ O=1):	0.4-0.65 g/cc
Vapor pressure:	N/A
Melting point:	N/A
Vapor density:	N/A
Evaporation rate:	N/A
Solubility in water:	Insoluble

Section 5 – FIRE AND EXPLOSION HAZARD DATA

Flash point	N/A
Non-flammable	OSHA Method 16CFR 1500.44 (Incorporated by reference in 29CFR 1910.1200)
Not Spontaneously Combustible	DOT Method 49CFR Part 173, Appendix E.
Extinguishing media	Water, fire fighting foam, dry chemical, or carbon dioxide
Special fire-fighting procedures	Remove all carbon from the building. Fire fighters should wear full protective gear and use self-contained breathing apparatus with a full face mask.
Unusual fire and explosion hazard:	Contact with strong oxidizing agents such as liquid oxygen, chlorine, ozone, or permanganates may result in explosion.

Section 6 – STABILITY AND REACTIVITY DATA

Stability:	extremely stable
Conditions to avoid:	acid, water, high humidity;
Incompatibility:	strong oxidizing agents
Hazardous decomposition products:	carbon monoxide may be generated in the event of fire or high temperature.
Hazardous Polymerization:	will not occur.

Section 7 – HEALTH HAZARD DATA

Routes of entry:	Ingestion or inhalation (dust)
Health hazards:	Inhalation of dust may cause temporary respiratory discomfort. (The acute inhalation LD50 (rat) is >10 g/kg.)
Carcinogenic or other health effects of long-term low-level exposure:	Not established
Signs and symptoms:	No consistent patterns have been established.
Medical conditions generally aggravated by exposure:	Not established

This product is non-hazardous according to the definitions of "health hazard" and "physical hazard" in the OSHA Hazard Communication Law (29 CFR part 1910).

Section 8- FIRST AID MEASURES

Eye	Flush thoroughly with water
Skin	Wash affected area well with soap and water. Get medical help if irritation persists
Ingestion	Give 2-3 glasses of milk or water to dilute. Contact physician or poison control center promptly for instruction. If vomiting occurs, give more fluids.

Inhalation Remove to fresh air. Get medical help if irritation develops.

Section 9 – SAFE HANDLING AND STORAGE

Waste disposal method: Unused activated carbon does not have any of the Federal E.P.A. characteristics of solid hazardous wastes. Dispose in accordance with governmental regulations.

Handling: Safety glasses or goggles and rubber gloves are recommended.
 Use an approved particulate filter if excessive dust is generated.
 Wash thoroughly after handling.
 Adequate ventilation

Storage temperature: Ambient
Pressure: Atmosphere
 Store product in a closed dry container
 Keep away from strong oxidizers, such as liquid oxygen, chlorine, etc.
 Avoid exposure to water and contaminated air.
 Store in dry place

Section 10 – PERSONAL PROTECTION

Respiratory protections: Use a niosh approved particulate filter if excessive dust is generated.
Ventilation: Local exhaust is recommended.
Protective clothing: Safety glasses or goggles and rubber gloves are recommended.

Section 11 – TRANSPORTATION INFORMATION

IATA-DGR class not regulated
IMDG Class not regulated

Steam activated carbons are excluded from provisions of IATA #395, IMCO Class 4.2 or UN #1362.

Carbon “protocol listed in the United Nations Manual of tests and Criteria (33.3.1) as such, class 4.2 provision for US DOT, IATA, ICAO, ADR and IMDG. Shipments do not apply.

Section 12 – REGULATORY INFORMATION

HCS Classification: Irritating material
US Federal regulation: TSCA, no products found
 SARA 302/304/311/312 extremely hazardous substances: not applicable
 SARA 302/304 emergency planning and notification: not applicable
 SARA 302/304/311/312 hazardous chemicals: not applicable
 SARA 311/312: immediate (acute) health hazard
State regulations: no products found
International regulation:
 United States: this product and/or its components are TSCS listed.

Canada: this product and/or its components are DSL listed or acceptable under CEPA
Registration regulation.
Europe: this product is EINECS listed
Australia: This product is AICS listed
Japan: This product contains ENCS and MITI listed components
China: this product is listed on Chinese IECSC;
South Korea: this product is ECL listed;
Philippines: this product is PICCS listed;
Switzerland: acceptable

Section 13- ACCIDENTAL RELEASE/SPILL

Collect and repackage unused carbon or sweep up and dispose in refuse container.

Clean up spills in a manner that does not disperse dust into air. Handle with industrial standard and safety practices. These include avoiding unnecessary exposure, and removal of material from eye, skin and cloth.

Section 14 – DISPOSAL CONSIDERATION

Activated carbon in its original form, is not hazardous material or hazardous waste.

Spent carbon may be hazardous depending on application.

Follow federal, state and local regulations for disposal;

Spent carbon may be recycled (reactivated).

Section 15- ECOLOGICAL INFORMATION

LC₅₀ (minnows) Not established
Chemical Fate information Not established
Effect of low concentrations on aquatic life: Unknown.

Activated carbon in its original form is not harmful to environment. It may adsorb substances in the surroundings.

Section 16- OTHER INFORMATION

Hazard Rating:

HMIS: Health -1
Flammability -1
Reactivity – 0
Protective Equipment – To be set by user

Activated carbons are not listed as potential carcinogens by any agency. However, respiratory protection is recommended.

Revision summary:

SDS instead of MSDS. Supersedes all previous versions.

The information herein is given in good faith but no warranty, expressed or implied, is made.

Polymer

SAFETY DATA SHEET

DIXIE ENVIRONMENTAL

POLYMER 757

1. PRODUCT AND COMPANY INFORMATION

Product Name: Dixie Polymer 757

Company: Dixie Environmental
71044 Riverside Dr.
Covington, LA 70433

Telephone: 225-335-6643

Emergency Telephone Number: INFOTRAC: 1-800-535-5053

Product Use: coagulant

Date of SDS: 4-15-15

Version: 1.0

2. HAZARDS IDENTIFICATION

According to Regulation 2012 OSHA Hazard Communication Standard: 29 CFR Part 1910.1200

Classification of the product:

Aquatic acute:	3	hazardous to the aquatic environment – acute
Aquatic chronic:	3	hazardous to the aquatic environment - chronic

Label elements:

Hazard Statement:

harmful to aquatic life.
harmful to aquatic life with long lasting effects.

Precautionary statements (prevention):

avoid release to the environment

Precautionary statements (disposal):

dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified: high risk of slipping due to leakage/spillage of product

According to Regulation 1994 OSHA Hazard Communication Standard: 29 CFR Part 1910.1200.

Emergency overview:

May cause some eye irritation.
Prolonged or repeated contact may cause mild skin irritation.
May cause irritation to the respiratory system, if mists or sprays may be inhaled.
Use NIOSH approved respirator as needed to mitigate exposure.
Wear NIOSH-certified chemical goggles.
Caution – slippery when wet!!!
Wear protective clothing.

3. COMPOSITION/INFORMATION ON INGREDIENTS

According to Regulation 2012 OSHA Hazard Communication Standard: 29 CFR Part 1910-1200.

CAS number	Content (W/W)	Chemical name
42751-79-1	> = 25.0 - < = 55.0%	1,2-Ethanediamine, polymer with (chloromethyl) oxirane and N-methylmethanamine

4. FIRST AID MEASURES

Description of first aid measures:

General advice: remove contaminated clothing.

Inhalation: keep patient calm, remove to fresh air and seek medical attention. Assist in breathing if necessary.

Skin contact: Rinse thoroughly with soap and water. If irritation develops, seek medical attention.

Eye contact: Rinse with plenty of lukewarm water, also under the eyelids for at least 15 minutes. Seek medical attention.

Ingestion: DO NOT induce vomiting. Rinse mouth and then drink plenty of water. Immediate medical attention required.

Most important symptoms and effects, both acute and delayed:

Symptoms: further important symptoms and effects are so far not known.

Hazards: no hazard is expected under intended use and appropriate handling.

Indication of any immediate medical attention and special treatment needed:

Note to physician: treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. FIRE FIGHTING MEASURES

Extinguishing media:

Suitable extinguishing media: Water spray. Foam. Dry powder.

Additional information: if water is used, restrict pedestrian and vehicular traffic in areas where slip hazard may exist.

Special hazards arising from the substance or mixture:

Hazards during firefighting: harmful vapors.

Evolution of fumes/fog: the substance/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters:

Protective equipment for firefighters: should be equipped with self-contained breathing apparatus and turn-out gear.

Further information: contaminated extinguishing water must be disposed of in accordance with official regulations.

6. ACCIDENTAL RELEASE MEASURES

Further accidental release measures: high risk of slipping due to leakage/spillage of product.

Personal precautions, protective equipment and emergency procedures: use personal protective clothing.

Environmental precautions: as with all chemical products, do not flush into surface water.

Methods and material for containment and cleaning up:

Small amounts: pick up with absorbent material (e.g. sand, sawdust, general-purpose binder). Dispose of absorbed material in accordance with regulations.

Large amounts: pump off product.

7. HANDLING AND STORAGE

Precautions for safe handling: no special measures necessary provided product is used correctly.

Protection against fire and explosion: no special precautions necessary.

Conditions for safe storage, including any incompatibilities:

Further information on storage conditions: keep container tightly closed and dry; store in a cool place.

Storage stability:

Storage temperature: < 0° C

Avoid freezing.
Protect from temperature below: 0° C
Frost sensitive.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Personal protective equipment:

Respiratory protections: Wear a NIOSH-certified (or equivalent) respirator as necessary.

Hand protection: Wear gloves in a suitable material such as PVC, Neoprene or Natural rubber.

Eye protection: Tightly fitting safety goggles with side-shields. Do not wear contact lenses where this product is used.

Body protection: body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in cases of splashes or EN ISO 13982 in case of dust)

General safety and hygiene measures: wear protective clothing as necessary to minimize contact. Handle in accordance with good industrial hygiene and safety practice. No eating, drinking, smoking or tobacco use at the place of work.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form: liquid

Color: yellow

Odor: amine-like

pH: approximately 6.0

Melting point: < 0° C

Boiling point: > 100° C

Flash point: > 100° C

Flammability: not flammable

Density: approx. 1.14 g/cm³

Thermal decomposition: no decomposition if stored and handled as prescribed/indicated.

Viscosity, dynamic: 600 – 900 mPa.s

Solubility in water: miscible

10. STABILITY AND REACTIVITY

Reactivity: no hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals: no corrosive effect on metal.

Oxidizing properties: not fire-propagating

Chemical stability: the product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions: No hazardous reactions when stored and handled according to instructions. The product is chemically stable.

Conditions to avoid: avoid excessive temperatures. Avoid freezing.

Incompatible materials: reactive chemicals, strong oxidizing agents.

Hazardous decomposition products:

Decomposition products: no hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition: no decomposition if stored and handled as prescribed/indicated.

11. TOXICOLOGICAL INFORMATION

Primary routes of exposure: routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute toxicity/effects:

Acute toxicity: assessment of acute toxicity: virtually nontoxic after a single ingestion.

Oral: LD50/oral/rat > 2000 mg/kg.

Irritation/corrosion: assessment of irritating effects: not irritating to eyes and skin.

skin: species-rabbit; non-irritant

eyes: species-rabbit; non-irritant

Sensitization: assessment of sensitization: based on the ingredients, there is no suspicion of a skin-sensitizing potential.

Aspiration hazard: no aspiration hazard expected.

Chronic toxicity effects:

Repeated dose toxicity: based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses. The product has not been tested. The statement has been derived from the properties of the individual components.

Genetic toxicity: based on the ingredients, there is no suspicion of a mutagenic effect.

Carcinogenicity: based on the ingredients, there is no suspicion of a carcinogenic effect in humans.

Reproductive toxicity: based on the ingredients, there is no suspicion of a toxic effect on reproduction.

Other information: the product has not been tested. The statements on toxicology have been derived from products of a similar structure and composition.

Symptoms of Exposure: further important symptoms and effects are so far not known.

12. ECOLOGICAL INFORMATION

Toxicity:

Acute toxicity:

Assessment of aquatic toxicity: Acutely harmful for aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Toxicity to fish:

LC50 (96 h) > 10 mg/l, fish

Aquatic invertebrates:

daphnia magna/EC50 (48 h): > 10 mg/l (under static conditions in the presence of 10 mg/L humic acid)

Persistence and degradability: the polymer component of the product is poorly biodegradable.

Mobility in soil: absorption to solid soil phase is expected.

Additional information:

Other exotoxicological advice: the product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

13. DISPOSAL CONSIDERATIONS

Waste disposal of substance: dispose of in accordance with national, state and local regulations. It is the waste generator's responsibility to determine if a particular waste is hazardous under RCRA.

Container disposal: Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

14. TRANSPORT INFORMATION

DOT: not classified as dangerous in the meaning of DOT regulations.

15. REGULATORY INFORMATION

Federal regulations:

Registration status:

Chemical TSCA, US released / listed

EPCRA 311/312 (hazard categories): not hazardous

State regulations:

CA Prop. 65: this product contains a chemical(s) known to the State of California to cause cancer and birth defects or other reproductive harm.

16. OTHER INFORMATION

U.S.A. HMIS:

Health	1
Flammability	0
Physical Hazards	0

U.S.A. NFPA:

Health: 1

Fire: 0

Reactivity: 0

Manufacturer Disclaimer:

THIS TECHNICAL AND SAFETY INFORMATION IS GIVEN IN GOOD FAITH TO OUR CUSTOMERS BUT IT SHOULD NOT BE CONSTRUED AS A WARRANTY OR REPRESENTATION FOR WHICH DIXIE ENVIRONMENTAL CAN ASSUME LEGAL RESPONSIBILITY. THIS INFORMATION SHALL NOT BE CONSTRUED AS RECOMMENDATION TO USE ANY PRODUCT IN CONFLICT WITH EXISTING PATENTS OR LICENSES. USERS SHOULD VERIFY AND TEST THE SUITABILITY OF THE PRODUCTS FOR THEIR OWN SPECIFIC APPLICATIONS. FURTHERMORE, NO RESPONSIBILITY IS ASSUMED OR IMPLIED FOR PRODUCT MISUSE AND RESULTING DAMAGES.