SAFETY DATA SHEET (SDS)

Jacquard Products
Manufactured by Rupert, Gibbon & Spider, Inc.
P.O. Box 425 | Healdsburg, CA 95448
800.442.0455 | Fax: 707.433.4906
www.jacquardproducts.com

Revision Date: 01/17/2024

SECTION 1 - CHEMICAL, PRODUCT & COMPANY INFORMATION

Product Name:	**FERRIC AMMONIUM CITRATE**	
Product Number/Code:	**CHM1102, CHM2102, JCY1100, JCY1101, JCY9000**	
Recommended Use:	Creating Cyanotype Prints	
Synonym(s):	Ammonium Ferric Citrate; Ammonium iron (III) citrate; Iron (III) ammonium citrate; 1,2,3-Propanetricarboxylic acid, 2-hydroxy, ammonium iron (3+) salt	
Restrictions on use:	None known.	
Manufacturer:	Rupert, Gibbon & Spider, Inc. 1147 Healdsburg Ave. Healdsburg, CA 95448 1-800-442-0455 / 707-433-9577	
Emergency Number:	**ChemTel, Inc.** - Contract #MIS9128344	
	North America: **1-800-255-3924**	International: **1-813-248-0585**

SECTION 2 - HAZARD(S) IDENTIFICATION

Toxicological Data on Ingredients:		
Hazard Classification		
Physical Hazards:	Skin Irritation	Category 2
	Eye Irritation	Category 2A
Health Hazards:	Specific Target Organ Toxicity - single exposure	Category 3
Label Elements		
Pictogram:		
Signal Words:	Warning	
Hazard Statements-EU:	H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation.	

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Precautionary Statements-EU:	
Prevention:	P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P264 Wash hands thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/protective clothing/eye protection/face protection.
Response:	P302+P352 IF ON SKIN: Wash with plenty of water. P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 If eye irritation persists: Get medical advice/attention. P312 Call a POISON CENTER/doctor/physician if you feel unwell. P321 Specific treatment (see warning on this label). P332+P313 If SKIN irritation occurs: Get medical advice/attention. P337+P313 If eye irritation persists: Get medical advice/attention. P362 Take off contaminated clothing and wash it before reuse.
Storage:	P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up.
Disposal:	P501 Dispose of contents/container in accordance with local regulations.
Hazard(s) not otherwise classified:	Potential Health Effects: Eyes - Causes eye irritation. Inhalation - May be harmful if inhaled. Causes respiratory tract irritation. Skin - Causes skin irritation. Ingestion - May be harmful if swallowed.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

Chemical identity	**Content in percent (%)***	**CAS #**	**EINECS # / ELINCS #**	**Formula**	**Molecular Weight**
Ferric Ammonium Citrate	>99	1185-57-5	214-686-6	$C_6H_8O_7 \cdot xFe_3 \cdot yNH_3$	N/A

SECTION 4 - FIRST AID MEASURES

Description of first aid measures:	
In the event of skin contact:	Flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention if necessary.
In the event of eye contact:	Rinse with plenty of water for at least 15 minutes and seek medical attention if necessary.
In the event of swallowing:	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention if necessary.
In the event of exposure by inhalation:	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if necessary.

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SECTION 5 - FIREFIGHTING MEASURES

Extinguishing media:	Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water.
Special hazards arising from the substance or mixture :	Emits toxic fumes (carbon oxides, nitrogen oxides, iron oxides) under fire conditions. (See also Stability and Reactivity section 10).
Advice for fire fighters:	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	See section 8 for recommendations on the use of personal protective equipment.
Methods and material for containment and clean up:	Pick up and arrange disposal without creating dust. Sweep up and shovel. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.
Environmental procedures:	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.

SECTION 7 - HANDLING AND STORAGE

Precautions for safe handling:	See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of dusts.
Conditions for safe storage including any incompatibilities:	Store in a cool, dry, well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities). Light sensitive. Hygroscopic.

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SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:			
Occupational exposure limits:			
Component	Exposure Limits	Basis	Identity
Ferric Ammonium Citrate	1 mg/m^3	TLV	ACGIH
	1 mg/m^3	PEL	OSHA
	1 mg/m^3	REL	NIOSH
TWA: TLV: REL: PEL: STEL: IDLH: WEEL: CEIL:	Time Weighted Average over 8 hours of work. Threshold Limit Value over 8 hours of work. Recommended Exposure Limit Permissible Exposure Limit Short Term Exposure Limit during x minutes. Immediately Dangerous to Life or Health. Workplace Environmental Exposure Levels Ceiling		

Individual protection measures, such as personal protective equipment:	
Eye/face protection:	Wear chemical safety glasses with side shields or goggles.
Skin/hand protection:	Wear nitrile or rubber gloves, apron or lab coat.
Other protective equipment:	Not available
Environmental exposure controls:	---
Respiratory protection:	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Other Recommendations:	Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

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SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

General information:	
Appearance and physical state:	Powder, granules or flakes
Color:	Green, red or brownish-yellow
Type of Odor:	Odorless
Odor threshold:	Not available
Important health, safety and environmental information:	
Initial Boiling Point and Boiling Range:	Not available
Melting Point/Freezing Point:	Not available
Flammability Classification:	Not flammable
Flash Point:	Not flammable
Auto-ignition Temperature:	Not available
Decomposition Temperature:	Not available
Flammability Limits (lower/upper):	Not flammable
Evaporation rate:	Not available
Vapor Pressure:	Not available
Vapor Density (Air=1):	Not available
Evaporation Rate (BuAc=1):	Not available
Octanol/Water Partition Coefficient (log Pow):	Not available
Specific Gravity:	Not available
Bulk Density:	Not available
Water Solubility:	Easily soluble in water. 25 g/100 ml at 20°C.
pH:	Not available
Viscosity:	Not available
Explosive Properties:	Not available
Oxidizing Properties:	Not available
Molecular Formula:	Not available
Molecular Weight:	Not available
Relative Density:	Not available

SECTION 10 - STABILITY AND REACTIVITY

Reactivity:	Not available
Chemical Stability:	Decomposes on exposure to light. Stable under recommended storage conditions.
Possibility of hazardous reactions:	Will not occur.
Conditions to avoid:	Light and heat.
Incompatible materials:	Strong oxidizing agents
Hazardous decomposition products:	Carbon oxides, nitrogen oxides, iron oxides

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SECTION 11 - TOXICOLOGICAL INFORMATION

Information on toxicological effects: Acute toxicity (list all possible routes of exposure)	
Skin:	Not available
Eyes:	Not available
Respiratory:	Not available
Ingestion:	LD50 Oral -rat - >2,000 mg/kg
Carcinogenicity:	
IARC:	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH:	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP:	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Signs & Symptoms of Exposure:	
Skin:	Contact may cause irritation or rash, particularly with moist skin.
Eyes:	May cause eye irritation with redness, tearing, and abrasion.
Respiratory:	Irritation, coughing, wheezing.
Ingestion:	Irritation, nausea, vomiting, diarrhea, hypermotility.
Chronic Toxicity:	Not available
Teratogenicity:	Not available
Mutagenicity:	Not available
Embryotoxicity:	Not available
Specific Target Organ Toxicity:	May cause respiratory irritation,
Reproductive Toxicity:	Not available

SECTION 12 - ECOLOGICAL INFORMATION

Toxicity:	
Aquatic Vertebrate:	LC0 - Fundulus heteroclitus - 200 mg/l - 7 d
Aquatic Invertebrate:	Not available
Terrestrial:	Not available
Persistence and Degradability:	Not available
Bioaccumulative Potential:	Not available
Mobility in Soil:	Not available
PBT and vPvB Assessment:	Not available
Other Adverse Effects:	Not available

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SECTION 13 - DISPOSAL CONSIDERATIONS

Waste treatment methods:	
Waste Residues:	Users should review their operations in terms of the applicable federal/ national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residue.
Product Containers:	Users should review their operations in terms of the applicable federal/ national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.
The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.	

SECTION 14 - TRANSPORT INFORMATION

US DOT:	Not Dangerous Goods
TDG:	Not Dangerous Goods
IMDG:	Not Dangerous Goods
Marine Pollutant:	No
IATA/ICAO:	Not Dangerous Goods

SECTION 15 - REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Not Listed
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Acute Health Hazard
SARA 312	Acute Health Hazard
SARA 313	Not Listed
WHMIS Canada	Not Listed

SECTION 16 - OTHER INFORMATION

HMIS Hazard ID:	
Health:	1
Flammability:	0
Reactivity:	0
Personal:	Not available
Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; *Chronic health effect	

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Disclaimer:
The information contained in this SDS is based on data from sources considered to be reliable but Rupert, Gibbon & Spider, Inc. does not guarantee the accuracy or completeness thereof. Rupert, Gibbon & Spider, Inc. urges each customer or recipient of this SDS to study it carefully to become aware of and understand the hazards associated with this product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology or fire and understand the data in this SDS.

Revision Date: 12/02/2020

National Chemical Inventories:	
All components of this product are listed on the following chemical substance inventories: TSCA (USA)	
DSL	(Canada)
EINECS	(Europe)
ENCS	(Japan) ECL
	(Korea)
AICS	(Australia) NZIoC
	(New Zealand)
PICCS	(Philippines)
IECSC	(China)

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Abbreviations:	
ACGIH	American Conference of Governmental Industrial Hygienists
ADR	International carriage of Dangerous goods by Road
AICS	Australian Inventory of Chemical Substances
ATE	Acute Toxicity Estimate
BfR	Bundesinstitut für Risikobewertung recommendations for food contact materials
BCF	Bioconcentration Factor
BOD5	5-day Biochemical Oxygen Demand
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CLP	Classification, Labeling and Packaging regulation
COD	Chemical Oxygen Demand DOT Department of Transportation DSL Domestic Substances List
EINECS	European Inventory of Existing Chemical Substances
ECL	Existing Chemicals List (Korea)
ENCS	Existing and New Chemical Substances Inventory (Japan)
EN 689	Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy.
ERG	Emergency Response Guide
GHS	Globally Harmonized System
HMIS	Hazardous Materials Information System IARC International Agency for Research on Cancer IATA International Air Transport Association
ICAO	International Civil Aviation Organization IDLH Immediately Dangerous to Life and Health IMDG International Maritime Dangerous Goods
LD50	Lethal Dose to 50% of test animal population
MAK	Maximale Arbeitsplatz Konzentration
NTP	National Toxicology Program
OEL	Occupational Exposure Limit
OSHA	Occupational Safety & Health Administration
PBT	Persistent, Bioaccumulative and Toxic vPvB Very Persistent and Very Bioaccumulative PEL Permissible exposure limit
PICCS	Philippine Inventory of Commercial Chemical Substances
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation and Authorization of Chemical Substances
RID	International carriage of dangerous goods by Rail SARA Superfund Amendments and Reauthorization Act STEL Short Term Exposure Limit
SVHC	Substance of Very High Concern
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
VOC	Volatile Organic Compound
WGK	Wassergefahrdungsklasse (Water Hazard Class) WHMIS Workplace Hazardous Material Identification System