

SAFETY DATA SHEET (SDS)

Revision Date: 03/02/2021

This SDS Sheet covers the following Jacquard products:

Item Number:	Item Name:
JAC600S	Acid Dye 4-Color Set with Citric Acid

These products contain the following components:

Item Number:	Item Name:	SDS Page Reference:
601	Acid Dye Sun Yellow	Acid Dye 601 Sun Yellow Pages 1-5
620	Acid Dye Hot Fuchsia	Acid Dye 620 Hot Fuchsia Pages 1-6
624	Acid Dye Turquoise	Acid Dye 624 Turquoise Pages 1-6
639	Acid Dye Jet Black	Acid Dye 639 Jet Black Pages 1-9
CHM1022 / CHM2022	Citric Acid	Citric Acid Pages 1-7



Dharma Trading Co.
FIBER ART SUPPLIES & CLOTHING BUSINESS SINCE 1969

SAFETY DATA SHEET

ISSUE DATE:1/27/21

1. PRODUCT IDENTIFICATION

PRODUCT NAME ACID DYE SUN YELLOW
PRODUCT CODE NUMBER...601
CHEMICAL FAMILY MONOAZO
T.S.C.A. STATUS IN COMPLIANCE
RECOMMENDED PRODUCT USE...Dye for fabric & other protein fibers/nylons. Also used for painting or printing.
RESTRICTED PRODUCT USE....All other uses

EMERGENCY NUMBER: ChemTel, Inc. - Contract #MIS9128344

N.America: 1-800-255-3924 / International: 1-813-248-0585

2. HAZARDS IDENTIFICATION

GHS Classification: Health Category 5-Oral Acute Toxicity

Pictogram: NONE

Signal Word: Warning

Hazard Statements: H303: May be Harmful if Swallowed

Precautionary Statements:

P264: Wash face, hands, and any exposed skin thoroughly after handling.

P280: Wear protective gloves/ protective clothing/eye protection/face protection

P270: Do not eat, drink, or smoke when using this product.

P260: Do not breath dust/fume/gas/mist/vapors/spray

P273: Avoid release to the environment

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical advice/attention.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water for 15 minutes .

P332 + P313 If skin irritation occurs: Get medical advice/attention.

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a comfortable position for breathing.

3. COMPOSITION/INFORMATIONS ON INGREDIENTS

Proprietary Azo Dye May be harmful if swallowed.

The exact ingredient percentages and composition has been withheld as a trade secret

4. FIRST-AID MEASURES

GENERAL INFORMATION: IMMEDIATELY REMOVE ALL CONTAMINATED CLOTHING

EYE CONTACT Wash immediately with large amounts of water for 15 minutes, lifting the upper and lower lids until no evidence of product remain. Get medical attention . Do not wear contact lenses while handling.

SKIN CONTACT Remove all contaminated clothing immediately. Wash immediately with soap and plenty of water. If a temporary skin reaction occurs, it should be treated as allergic contact dermatitis. Launder contaminated clothing before reuse.

INGESTION Dilute with water. Get medical attention. Never give fluids or induce vomiting if patient is unconscious or has convulsions.

INHALATION If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. If breathing is difficult, give oxygen. Call a physician.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

The most significant symptoms and effects are described in the labelling (see section 2) and/or in section 11

INDICATION OF ANY SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

No data available

5. FIREFIGHTING MEASURES

FLASH POINT Not Applicable

EXTINGUISHING MEDIA CO2 Dry Chemical Foam Water Fog

SPECIAL FIRE FIGHTING PROCEDURES/UNUSUAL FIRE OR EXPLOSION HAZARDS:

Firefighters should be equipped with protective clothing & self-contained breathing apparatus to protect against potentially toxic & irritating fumes. In case of fire or explosion, keep unnecessary people away. Isolate hazard area & any entry. Stay upwind, out of low areas, and ventilate closed spaces before entering.

ADDITIONAL INFORMATION Avoid dusting conditions. May form explosive dust mixtures with air.

6. ACCIDENTAL RELEASE MEASURES

IN CASE MATERIAL IS RELEASED/SPILLED:

Avoid formation and deposition of dust. Do not empty into drains or waters. Do not touch or walk through the spilled material: stop leak if you can do it without risk. Take up with sand or other non-combustible absorbent material or suitable vacuum and place into labeled sealable containers. Scrub spilled area with detergent, flush with copious amount of water. For further disposal measures see section 13.

7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

In accord with good industrial practice. Handle with care and avoid personal contact

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Keep container protected from direct sunlight in a dry, cool and in a well-ventilated area.
Keep the container tightly sealed and away from any incompatible materials (see Section 10)..

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

APPROPRIATE ENGINEERING CONTROLS:

Handle with good industrial practices and industrial hygiene. Wash hands after use.

GENERAL PROTECTIVE MEASURES:

Do not breathe dust. Avoid contact with eyes and skin. Immediately remove all contaminated clothing.

EYE PROTECTIONEmployees should wear protective eye-goggles with side protection shield.

SKIN PROTECTIONEmployees should avoid skin contact by wearing protective clothing. Long sleeve shirts, pants, gloves e.g. of PVC or nitrile rubber, and boots are recommended.

Additional protections such as impervious suits are recommended when the potential for dermal contact is significant. Employees should wash their hands and face before eating and drinking and shower thoroughly before leaving work. Keep away from food and drink stuffs.

RESPIRATORY PROTECTIONInhalation of dust and aerosols must be absolutely prevented by the use of a NIOSH approved dust respirator.

VENTILATIONUse local ventilation.

OTHERWear overalls, apron or other protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE POWDER

COLOR YELLOW

ODOR NONE

ODOR THRESHOLD.....NA

SOLUBILITY IN WATER 45 g/l @ 90 C

BULK DENSITY ND

RELATIVE DENSITY.....NA

VISCOSITY.....NA

pH 6.0 – 10.0 @ 10.0 g/l

MELTING POINT/FREEZING POINT.....NA

PARTITION COEFFICIENT: N-OCTANOL/WATER.....ND

BOILING POINT.....NA

VAPOR PRESSURE.....NA

VAPOR DENSITY.....NA

EVAPORATION RATE.....NA

FLAMMABILITY.....NA

FLASH POINT.....NA

AUTO-IGNITION TEMP..... NA

DECOMPOSITION TEMPERATURE....392 F

UEL.....NA

LEL.....NA

% VOLATILE: VALUE: ND

UNIT: %

COMMENT:

10. STABILITY AND REACTIVITY

THERMAL DECOMPOSITION: No thermal decomposition when stored and handled correctly.
POSSIBILITY OF HAZARDOUS REACTIONS : In the case of dusty organic products the possibility of a dust explosion should always be considered.
CHEMICAL STABILITY.....Stable
INCOMPATIBLE MATERIALS: None
HAZARDOUS DECOMPOSITION PRODUCTS.....CO₂, CO, SULFUR OXIDES, NITROGEN OXIDES
CONDITIONS TO AVOID.....Avoid dusting conditions and sparks/flame.
REACTIVITY....Will not occur

11. TOXICOLOGICAL INFORMATION

ANIMAL TOXICITY ORAL - LD50 (INGESTION).....>3000 mg/l (rats)
FISH, LC50> 200 mg/l 96 hour (brachydanio rerio)
EYE EFFECTS.....NON-IRRITANT (RABBIT EYE)
SKIN EFFECTSNON-IRRITANT (RABBIT)
SENSITIZATIONNOT EXPECTED
PRIMARY ROUTE OF EXPOSURE

INHALATION:	YES	SKIN ABSORPTION:	NO	INGESTION:	NO
SKIN CONTACT:	YES	EYE CONTACT:	YES		

CARCINOGEN STATUS

IARC:	NO	NTP:	NO	OSHA:	NO	ACGIH:	NO
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HMIS: 1 1 0 E

EFFECTS OF OVEREXPOSURE

None Known

SIGNS AND SYMPTOMS OF OVEREXPOSURE

May be irritating to the eyes, skin, or respiratory tract.

MEDICAL CONDITIONS AGGRAVATED

Persons with any pre-existing skin, eye or respiratory condition may be more susceptible to the effects of this product.

12. ECOLOGICAL INFORMATION

BIODEGRADABILITY: < 10 %
AQUATIC TOXICITY: EC50 > 100 mg/l (48 hour daphnia magna straus)
BACTERIA TOXICITY: ND
AOX: > 2.0 %

13. DISPOSAL CONSIDERATIONS

PRODUCT: If utilization or recycling of the product is not possible, it should be disposed of in accordance with existing federal, state and local environmental regulations, e.g. by incineration in a suitable plant.
UNCLEANED PACKAGING: Soiled, empty containers are to be treated in the same way as the contents.

14. TRANSPORT INFORMATION

PROPER SHIPPING NAME: NON-HAZARDOUS INK MATERIAL
D.O.T. HAZARD CLASSIFICATION: NOT REGULATED
FRT. CLASS PACKAGE: 55

IATA: NON-REGULATED

IMDG: NON-REGULATED

15. REGULATORY DATA

US REGULATIONS:

TSCA: The components of this product are listed on the TSCA Inventory

SARA 313: This product is not subject to SARA Title III Section 313 reporting requirements under 40 CFR 372.

SARA 312:	Immediate (acute) health hazard	Yes
	Delayed (chronic) health hazard	No
	Fire hazard	No
	Sudden Release of Pressure	No
	Reactivity	No

CALIFORNIA PROPOSITION 65: This product does NOT contain any components currently on the California List of Known Carcinogens and reproductive Toxins.

This product is not subject to the German Ordinance that bans certain azo dyes or the 19th Amendment of the Council Directive 76/769/EEC.

16. OTHER INFORMATION

Disclaimer

Dharma Trading Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

MSDS Created: March 28, 2017

MSDS Revised: January 27, 2021

SAFETY DATA SHEET

ISSUE DATE: 1/27/21

1. PRODUCT IDENTIFICATION

PRODUCT NAME ACID DYE HOT FUCHSIA

PRODUCT CODE NUMBER . 620

CHEMICAL FAMILY XANTHENE

T.S.C.A. STATUS CCOMPLIANCE

RECOMMENDED PRODUCT USE...Dye for fabric & other protein fibers/nylons. Also used for painting or printing.

RESTRICTED PRODUCT USE....All other uses

EMERGENCY NUMBER: ChemTel, Inc. - Contract #MIS9128344

N.America: 1-800-255-3924 / International: 1-813-248-0585

2. HAZARDS IDENTIFICATION

GHS Classification: Health Category 2-Mutagen



Pictogram:

Signal Word: Warning

Hazard Statements: H341: Suspected of Causing Genetic Defects

Precautionary Statements:

- P264:** Wash face, hands, and any exposed skin thoroughly after handling.
- P280:** Wear protective gloves/ protective clothing/eye protection/face protection
- P270:** Do not eat, drink, or smoke when using this product.
- P260:** Do not breath dust/fume/gas/mist/vapors/spray
- P284:** Wear Respiratory Protection
- P201:** Obtain special instructions before use.
- P273:** Avoid release to the environment
- P305 + P351 + P338** IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337 + P313** If eye irritation persists: Get medical advice/attention.
- P302 + P352** IF ON SKIN: Wash with plenty of soap and water for 15 minutes .
- P333 + P313** If skin irritation or rash occurs: Get medical advice/attention.
- P301 + P330 + P331** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P304 + P340** IF INHALED: Remove victim to fresh air and keep at rest in a comfortable position for breathing.
- P342 + P311** If experiencing respiratory symptoms: Call a Poison Center or doctor/physician.
- P308 + P313** IF exposed or concerned: get medical advice / attention

3. COMPOSITION/INFORMATIONS ON INGREDIENTS

Proprietary Acid Dye In vitro mutagen in animal tests

The exact ingredient percentages and composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

GENERAL INFORMATION: IMMEDIATELY REMOVE ALL CONTAMINATED CLOTHING

- EYE CONTACT** Wash immediately with large amounts of water for 15 minutes, lifting the upper and lower lids until no evidence of product remain. Get medical attention immediately. Do not wear contact lenses while handling.
- SKIN CONTACT** Remove all contaminated clothing immediately. Wash immediately with soap and plenty of water. If a temporary skin reaction occurs, it should be treated as allergic contact dermatitis. Launder contaminated clothing before reuse.
- INGESTION** Dilute with water. Get medical attention. Never give fluids or induce vomiting if patient is unconscious or has convulsions.
- INHALATION** If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. If breathing is difficult, give oxygen. Call a physician.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

The most significant symptoms and effects are described in the labelling (see section 2) and/or in section 11

INDICATION OF ANY SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

No data available

5. FIREFIGHTING MEASURES

FLASH POINT Not Applicable

EXTINGUISHING MEDIA CO2 Dry Chemical Foam Water Fog

SPECIAL FIRE FIGHTING PROCEDURES/UNUSUAL FIRE OR EXPLOSION HAZARDS:

Firefighters should be equipped with protective clothing & self-contained breathing apparatus to protect against potentially toxic & irritating fumes. In case of fire or explosion, keep unnecessary people away. Isolate hazard area & any entry. Stay upwind, out of low areas, and ventilate closed spaces before entering.

ADDITIONAL INFORMATION Avoid dusting conditions. May form explosive dust mixtures with air.

6. ACCIDENTAL RELEASE MEASURES

IN CASE MATERIAL IS RELEASED/SPILLED:

Avoid formation and deposition of dust. Do not empty into drains or waters. Do not touch or walk through the spilled material: stop leak if you can do it without risk. Take up with sand or other non-combustible absorbent material or suitable vacuum and place into labeled sealable containers. For further disposal measures see section 13.

7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

In accord with good industrial practice. Handle with care and avoid personal contact

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Keep container protected from direct sunlight in a dry, cool and in a well-ventilated area.

Keep the container tightly sealed and away from any incompatible materials (see Section 10)..

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

APPROPRIATE ENGINEERING CONTROLS:

Handle with good industrial practices and industrial hygiene. Wash hands after use.

GENERAL PROTECTIVE MEASURES:

Do not breathe dust. Avoid contact with eyes and skin. Immediately remove all contaminated clothing.

EYE PROTECTION Employees should wear protective eye-goggles with side protection shield.

SKIN PROTECTION Employees should avoid skin contact by wearing protective clothing. Long sleeve shirts, pants, gloves e.g. of PVC or nitrile rubber, and boots are recommended.

Additional protections such as impervious suits are recommended when the potential for dermal contact is significant. Employees should wash their hands and face before eating and drinking and shower thoroughly before leaving work. Keep away from food and drink stuffs.

RESPIRATORY PROTECTION Inhalation of dust and aerosols must be absolutely prevented by the use of a NIOSH approved dust respirator.

VENTILATION Use local ventilation.

OTHER Wear overalls, apron or other protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE POWDER
COLOR RED
ODOR NONE
ODOR THRESHOLD.....NA
SOLUBILITY IN WATER 10 g/l at 30 deg C
BULK DENSITY ND
RELATIVE DENSITY.....NA
VISCOSITY.....NA
pH 6.5 – 8.0 @ 1.0 g/l
MELTING POINT/FREEZING POINT.....NA
PARTITION COEFFICIENT: N-OCTANOL/WATER.....ND
BOILING POINT.....NA
VAPOR PRESSURE.....NA
VAPOR DENSITY.....NA
EVAPORATION RATE.....NA
FLAMMABILITY.....NA
FLASH POINT.....NA
AUTO-IGNITION TEMP NA
DECOMPOSITION TEMPERATURE....ND
UEL.....NA
LEL.....NA
% VOLATILE: VALUE: ND UNIT: % COMMENT:

10. STABILITY AND REACTIVITY

THERMAL DECOMPOSITION: No thermal decomposition when stored and handled correctly.
POSSIBILITY OF HAZARDOUS REACTIONS : In the case of dusty organic products the possibility of a dust explosion should always be considered.
CHEMICAL STABILITY.....Stable
INCOMPATIBLE MATERIALS: None
HAZARDOUS DECOMPOSITION PRODUCTS.....CO₂, CO, SULFUR OXIDES, NITROGEN OXIDES
CONDITIONS TO AVOID.....Avoid dusting conditions and sparks/flame.
REACTIVITY....Will not occur

11. TOXICOLOGICAL INFORMATION

ANIMAL TOXICITY ORAL - LD50 (INGESTION).....> 5000 mg/kg (RAT)
FISH, LC50450 mg/l (48 hour, Rainbow trout)
EYE EFFECTS.....NON-IRRITANT (RABBIT EYE)
SKIN EFFECTSNON-IRRITANT (RABBIT)
SENSITIZATIONNOT A SENSITIZER (RIPT- HUMANS)

PRIMARY ROUTE OF EXPOSURE

INHALATION: YES SKIN ABSORPTION: NO INGESTION: NO
SKIN CONTACT: YES EYE CONTACT: YES

CARCINOGEN STATUS

IARC: NO NTP: NO OSHA: NO
HMIS : 1 0 0 E

CHRONIC EFFECTS OF OVEREXPOSURE

Contains Acid Red 052.. Has been found to be mutagenic in hamster cell tests in vitro. The relevance to humans is not known

SIGNS AND SYMPTOMS OF OVEREXPOSURE

May be irritating to the eyes, skin, and respiratory tract.

MEDICAL CONDITIONS AGGRAVATED

Persons with any pre-existing skin, eye or respiratory condition may be more susceptible to the effects of this product.

12. ECOLOGICAL INFORMATION

BIODEGRADABILITY: < 10 %
COD: 1389 mg/g
BACTERIA TOXICITY: > 300 mg/l (Inhibition Activited sludge bacteria)
AOX: 0.0 %

13. DISPOSAL CONSIDERATIONS

PRODUCT: If utilization or recycling of the product is not possible, it should be disposed of in accordance with existing federal, state and local environmental regulations, e.g. by incineration in a suitable plant.

UNCLEANED PACKAGING: Soiled, empty containers are to be treated in the same way as the contents.

14. TRANSPORT INFORMATION

PROPER SHIPPING NAME: NON-HAZARDOUS INK MATERIAL
D.O.T. HAZARD CLASSIFICATION: NOT REGULATED
FRT. CLASS PACKAGE: 55

IATA (C, P) : NON-HAZARDOUS

IMDG: NON-HAZARDOUS

15. REGULATORY DATA

US REGULATIONS:

TSCA: The components of this product are listed on the TSCA Inventory

SARA 313: This product is not subject to SARA Title III Section 313 reporting requirements under 40 CFR 372.

SARA 312:	Immediate (acute) health hazard	No
	Delayed (chronic) health hazard	Yes
	Fire hazard	No
	Sudden Release of Pressure	No
	Reactivity	No

This product is not subject to the German Ordinance that bans certain azo dyes or the 19th Amendment of the Council Directive 76/769/EEC.

CALIFORNIA PROPOSITION 65: This product does NOT contain any components currently on the California List of Known Carcinogens and reproductive Toxins

16. OTHER INFORMATION

Disclaimer

Rupert, Gibbon & Spider, Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

MSDS Created: March 28, 2017

MSDS Revised: January 27, 2021

SAFETY DATA SHEET

ISSUE DATE: 1/27/21

1. PRODUCT IDENTIFICATION

PRODUCT NAME ACID DYE TURQUOISE
PRODUCT CODE NUMBER....624
CHEMICAL FAMILY TRIPHENYLMETHANE
T.S.C.A. STATUS COMPLIANCE
RECOMMENDED PRODUCT USE...Dye for fabric & other protein fibers/nylons. Also used for painting or printing.
RESTRICTED PRODUCT USE....All other uses

EMERGENCY NUMBER: ChemTel, Inc. - Contract #MIS9128344

N.America: 1-800-255-3924 / International: 1-813-248-0585

2. HAZARDS IDENTIFICATION

GHS Classification: Environmental Category 3- Chronic Aquatic Toxicity

Pictogram: NONE

Signal Word: NONE

Hazard Statements: H412: Harmful to Aquatic Life with Long-Lasting Effects

Precautionary Statements:

P264: Wash face, hands, and any exposed skin thoroughly after handling.

P280: Wear protective gloves/ protective clothing/eye protection/face protection

P270: Do not eat, drink, or smoke when using this product.

P260: Do not breath dust/fume/gas/mist/vapors/spray

P273: Avoid release to the environment

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water for 15 minutes .

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a comfortable position for breathing.

3. COMPOSITION/INFORMATIONS ON INGREDIENTS

Proprietary Triphenylmethane Dye Harmful to aquatic life

The exact ingredient percentages and composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

GENERAL INFORMATION: IMMEDIATELY REMOVE ALL CONTAMINATED CLOTHING

EYE CONTACT Wash immediately with large amounts of water for 15 minutes, lifting the upper and lower lids until no evidence of product remain. Get medical attention immediately. Do not wear contact lenses while handling.

SKIN CONTACT Remove all contaminated clothing immediately. Wash immediately with soap and plenty of water. If a temporary skin reaction occurs, it should be treated as allergic contact dermatitis. Launder contaminated clothing before reuse.

INGESTION Dilute with water. Get medical attention. Never give fluids or induce vomiting if patient is unconscious or has convulsions.

INHALATION If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. If breathing is difficult, give oxygen. Call a physician.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

The most significant symptoms and effects are described in the labelling (see section 2) and/or in section 11

INDICATION OF ANY SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

No data available

5. FIREFIGHTING MEASURES

FLASH POINT NA

EXTINGUISHING MEDIA CO₂, Dry Chemical Foam Water Fog

SPECIAL FIRE FIGHTING PROCEDURES/UNUSUAL FIRE OR EXPLOSION HAZARDS:

Firefighters should be equipped with protective clothing & self-contained breathing apparatus to protect against potentially toxic & irritating fumes. In case of fire or explosion, keep unnecessary people away. Isolate hazard area & any entry. Stay upwind, out of low areas, and ventilate closed spaces before entering.

ADDITIONAL INFORMATION Avoid dusting conditions. May form explosive dust mixtures with air.

6. ACCIDENTAL RELEASE MEASURES

IN CASE MATERIAL IS RELEASED/SPILLED:

Avoid formation and deposition of dust. Do not empty into drains or waters. Do not touch or walk through the spilled material: stop leak if you can do it without risk. Take up with sand or other non-combustible absorbent material or suitable vacuum and place into labeled sealable containers. For further disposal measures see section 13.

7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

In accord with good industrial practice. Handle with care and avoid personal contact

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Keep container protected from direct sunlight in a dry, cool and in a well-ventilated area.
Keep the container tightly sealed and away from any incompatible materials (see Section 10)..

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

APPROPRIATE ENGINEERING CONTROLS:

Handle with good industrial practices and industrial hygiene. Wash hands after use.

GENERAL PROTECTIVE MEASURES:

Do not breathe dust. Avoid contact with eyes and skin. Immediately remove all contaminated clothing.

EYE PROTECTIONEmployees should wear protective eye-goggles with side protection shield.

SKIN PROTECTIONEmployees should avoid skin contact by wearing protective clothing. Long sleeve shirts, pants, gloves e.g. of PVC or nitrile rubber, and boots are recommended. Additional protections such as impervious suits are recommended when the potential for dermal contact is significant. Employees should wash their hands and face before eating and drinking and shower thoroughly before leaving work. Keep away from food and drink stuffs.

RESPIRATORY PROTECTIONInhalation of dust and aerosols must be absolutely prevented by the use of a NIOSH approved dust respirator.

VENTILATIONUse local ventilation.

OTHERWear overalls, apron or other protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE POWDER
COLOR BLUISH RED
ODOR NONE
ODOR THRESHOLD.....NA
SOLUBILITY IN WATER 40 g/l @ 100 C
BULK DENSITY ND
RELATIVE DENSITY.....NA
VISCOSITY.....NA
pH 7.0 – 7.5 @ 1.0 % in water 20C
MELTING POINT/FREEZING POINT.....NA
PARTITION COEFFICIENT: N-OCTANOL/WATER.....ND
BOILING POINT.....NA
VAPOR PRESSURE.....NA
VAPOR DENSITY.....NA
EVAPORATION RATE.....NA
FLAMMABILITY.....NA
FLASH POINT.....NA
AUTO-IGNITION TEMP NA
DECOMPOSITION TEMPERATURE....ND
UEL.....NA
LEL.....NA
% VOLATILE: VALUE: ND UNIT: % COMMENT:

10. STABILITY AND REACTIVITY

THERMAL DECOMPOSITION: No thermal decomposition when stored and handled correctly.

POSSIBILITY OF HAZARDOUS REACTIONS : In the case of dusty organic products the possibility of a dust explosion should always be considered.

CHEMICAL STABILITY.....Stable

INCOMPATIBLE MATERIALS: None

HAZARDOUS DECOMPOSITION PRODUCTS.....CO₂, CO, SULFUR OXIDES, NITROGEN OXIDES

CONDITIONS TO AVOID.....In the case of dusty organic products the possibility of a dust explosion should always be considered.Avoid dusting conditions and sparks/flame.

REACTIVITY....Will not occur

11. TOXICOLOGICAL INFORMATION

ANIMAL TOXICITY ORAL - LD50 (INGESTION).....> 5000 mg/kg (RATS)
FISH, LC5010 – 100 mg/l (48 hour Rainbow Trout)
EYE EFFECTS.....NON-IRRITANT (RABBIT EYE)
SKIN EFFECTSNON-IRRITANT (RABBIT)
SENSITIZATIONNOT EXPECTED

PRIMARY ROUTE OF EXPOSURE

INHALATION:	YES	SKIN ABSORPTION:	NO	INGESTION:	NO
SKIN CONTACT:	YES	EYE CONTACT:	YES		

CARCINOGEN STATUS

IARC: NO NTP: NO OSHA: NO

HMIS 1 1 0 E

CHRONIC EFFECTS OF OVEREXPOSURE

None Known

SIGNS AND SYMPTOMS OF OVEREXPOSURE

. May be irritating to the eyes, skin and respiratory tract.

MEDICAL CONDITIONS AGGRAVATED

Persons with any pre-existing skin or eye conditions may be more susceptible to the effects of this product.

12. ECOLOGICAL INFORMATION

BIODEGRADABILITY: 25 – 50 %

BACTERIA TOXICITY: ND

13. DISPOSAL CONSIDERATIONS

PRODUCT: If utilization or recycling of the product is not possible, it should be disposed of in accordance with existing federal, state and local environmental regulations, e.g. by incineration in a suitable plant.

UNCLEANED PACKAGING: Soiled, empty containers are to be treated in the same way as the contents.

14. TRANSPORT INFORMATION

PROPER SHIPPING NAME: NON-HAZARDOUS INK MATERIAL

D.O.T. HAZARD CLASSIFICATION: NOT REGULATED

FRT. CLASS PACKAGE: 55

IATA: NON-REGULATED

IMDG: NON-REGULATED

15. REGULATORY DATA

US REGULATIONS:

TSCA: The components of this product are listed on the TSCA Inventory

SARA 313: This product is not subject to SARA Title III Section 313 reporting requirements under 40 CFR 372.

SARA 312:	Immediate (acute) health hazard	Yes
	Delayed (chronic) health hazard	No
	Fire hazard	No
	Sudden Release of Pressure	No
	Reactivity	No

This product is not subject to the German Ordinance that bans certain azo dyes or the 19th Amendment of the Council Directive 76/769/EEC.

CALIFORNIA PROPOSITION 65: This product does NOT contain any components currently on the California List of Known Carcinogens and reproductive Toxins

16. OTHER INFORMATION

Disclaimer

Rupert, Gibbon & Spider, Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

MSDS Prepared: March 22, 2017

MSDS Revised: January 27, 2021

SAFETY DATA SHEET (SDS)


Acid Dye - Jet Black - Pg 1

Revision Date: 03/02/2021

SECTION 1 - CHEMICAL, PRODUCT & COMPANY INFORMATION

Product Name:	ACID DYE - JET BLACK	
Product Number/Code:	JACI-JAC3 639	
Recommended Use:	Dye for fabric & other protein fibers/nylons. Also used for painting or printing.	
T.S.C.A. Status :	In compliance	
Restrictions on use:	All other uses	
Emergency Number:	ChemTel, Inc. - Contract #MIS9128344	
	North America: 1-800-255-3924	International: 1-813-248-0585

SECTION 2 - HAZARD(S) IDENTIFICATION

This product is not considered to be or contain hazardous chemicals based on evaluations made by our company under the OSHA Hazard Communication Standard, reference 29 CFR 1910.1200.		
Toxicological Data on Ingredients:		
Hazard Classification		
Physical Hazards:	No information available	
Health Hazards:	Eye Irritant	Category 2A
Environmental Hazards:	Chronic Aquatic Toxicity	Category 3
Label Elements		
Pictogram:		
Signal Words:	Warning	
Hazard Statements-EU:	H319: Causes Serious Eye Irritation H412: Harmful to Aquatic Life with Long-Lasting Effects	

Precautionary Statements-EU:	
Prevention:	P260: Do not breath dust/fume/gas/mist/vapors/spray P264: Wash face, hands, and any exposed skin thoroughly after handling. P270: Do not eat, drink, or smoke when using this product. P273: Avoid release to the environment P280: Wear protective gloves/ protective clothing/eye protection/face protection
Response:	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 If eye irritation persists: Get medical advice/attention. P302 + P352 IF ON SKIN: Wash with plenty of soap and water for 15 minutes. P332 + P313 If skin irritation occurs: Get medical advice/attention. P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a comfortable position for breathing.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

Chemical identity	Content in percent (%)*	CAS #	Chemical Family
Proprietary Blue Azo Dye Component 1 <i>Eye irritant, aquatic toxicity</i>	-	-	Proprietary mix
Proprietary Orange Azo Dye Component 2 <i>Aquatic toxicity</i>	-	-	Proprietary mix
Proprietary Anthraquinone Dye <i>Eye irritant</i>	-	-	Anthraquinone

The exact ingredient percentages and composition of non-hazardous components have been withheld as a trade secret.



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SECTION 4 - FIRST AID MEASURES

Description of first aid measures:	
In the event of skin contact:	Remove all contaminated clothing immediately. Wash immediately with soap and plenty of water. If a temporary skin reaction occurs, it should be treated as allergic contact dermatitis. Launder contaminated clothing before reuse.
In the event of eye contact:	Wash immediately with large amounts of water for 15 minutes, lifting the upper and lower lids until no evidence of product remain. Get medical attention immediately. Do not wear contact lenses while handling.
In the event of swallowing:	Dilute with water. Get medical attention. Never give fluids or induce vomiting if patient is unconscious or has convulsions.
In the event of exposure by inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. If breathing is difficult, give oxygen. Call a physician.
Most important symptoms and effects, acute and delayed:	The most significant symptoms and effects are described in the labelling (see Section 2) and/or in Section 11.
Indication of any immediate medical attention and special treatment needed:	No data available

SECTION 5 - FIREFIGHTING MEASURES

Flashpoint:	N/A
Extinguishing media:	CO ₂ , Dry Chemical, Foam, Water, Fog
Special hazards arising from the substance or mixture:	Firefighters should be equipped with protective clothing & self-contained breathing apparatus to protect against potentially toxic & irritating fumes. In case of fire or explosion, keep unnecessary people away. Isolate hazard area & any entry. Stay upwind, out of low areas, and ventilate closed spaces before entering.
Advice for firefighters:	Avoid dusting conditions. May form explosive dust mixtures with air.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Avoid formation and deposition of dust. Do not touch or walk through the spilled material: stop leak if you can do it without risk.
Methods and material for containment and clean up:	Take up with sand or other non-combustible absorbent material or suitable vacuum and place into labeled sealable containers. Scrub spilled area with detergent, flush with copious amount of water.
Environmental procedures:	Do not empty into drains or waters.
Reference to other sections:	For further disposal measures see Section 13.

SECTION 7 - HANDLING AND STORAGE

Precautions for safe handling:	In accord with good industrial practice. Handle with care and avoid personal contact
Conditions for safe storage including any incompatibilities:	Keep container protected from direct sunlight in a dry, cool and in a well-ventilated area. Keep the container tightly sealed and away from any incompatible materials (see Section 10).

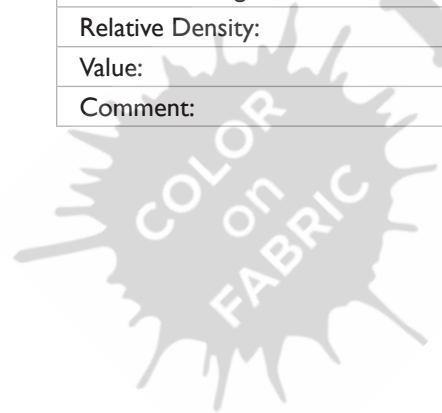
SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:	
Appropriate engineering controls:	Handle with good industrial practices and industrial hygiene. Wash hands after use.
Individual protection measures, such as personal protective equipment:	
General protective measures:	Do not breathe dust. Avoid contact with eyes and skin. Immediately remove all contaminated clothing.
Eye/face protection:	Employees should wear protective eye goggles with side protection shield.
Skin protection:	Employees should avoid skin contact by wearing protective clothing. Long sleeve shirts, pants, gloves (e.g. of PVC or nitrile rubber), and boots are recommended. Additional protections such as impervious suits are recommended when the potential for dermal contact is significant. Employees should wash their hands and face before eating and drinking and shower thoroughly before leaving work. Keep away from food and drink stuffs.
Other protective equipment:	Wear overalls, apron or other protective clothing.
Respiratory protection:	Inhalation of dust and aerosols must be absolutely prevented by the use of a NIOSH-approved dust respirator.
Ventilation:	Use local ventilation.



SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

General information:	
Appearance and physical state:	Powder
Color:	Grey
Type of Odor:	None
Odor threshold:	N/A
Important health, safety and environmental information:	
Initial Boiling Point and Boiling Range:	N/A
Melting Point/Freezing Point:	N/A
Flammability Classification:	N/A
Flash Point:	N/A
Auto-ignition Temperature:	N/A
Decomposition Temperature:	N/D
Flammability Limits (lower/upper):	N/A
Evaporation rate:	N/A
Vapor Pressure:	N/A
Vapor Density (Air=1):	N/A
Octanol/Water Partition Coefficient (log Pow):	N/D
Specific Gravity:	N/A
Bulk Density:	400-600 kg/m ₃
Water Solubility:	30-40 g/l @ 90 °C
pH:	6.5-7.5 @ 10.0g/120 °C
Viscosity:	N/A
Explosive Properties:	N/A
Oxidizing Properties:	N/A
Molecular Formula:	N/A
Molecular Weight:	N/A
Relative Density:	N/A
Value:	N/A
Comment:	De-dusting oil



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SECTION 10 - STABILITY AND REACTIVITY

Reactivity:	Will not occur
Stability:	Stable
Possibility of hazardous reactions:	In the case of dusty organic products the possibility of a dust explosion should always be considered.
Conditions to avoid:	Avoid dusting conditions and sparks/flare.
Incompatible materials:	None
Hazardous decomposition products:	CO ₂ , CO, Sulfur Oxides, Nitrogen Oxides
Thermal decomposition:	No thermal decomposition when stored and handled correctly.

SECTION 11 - TOXICOLOGICAL INFORMATION

Information on toxicological effects:		
Acute toxicity (list all possible routes of exposure)		
Acute Oral Toxicity:	LD50: (Ingestion) >5,000 mg/kg (Rat) Fish, LC50: 10-100 mg/l (48 hour, Rainbow Trout)	
Skin Corrosion/Irritation:	Non-Irritant (Rabbit)	
Serious Eye Damage / Eye Irritation:	Irritant (Rabbit eye)	
Respiratory or Skin Sensitization:	Not expected	
Carcinogen Status:	IARC:	No
	NTP:	No
	OSHA:	No
	ACGIH:	No
Effects of Overexposure:	None Known	
Signs and Symptoms of Overexposure:	May be irritating to the eyes, skin or respiratory tract.	
Medical Conditions Aggravated:	Persons with any pre-existing skin, eye or respiratory condition may be more susceptible to the effects of this product.	
Potential Health Effects:		
Skin Contact:	No	
Skin Absorption:	No	
Eye Contact:	Yes	
Ingestion:	No	
Inhalation:	Yes	

SECTION 12 - ECOLOGICAL INFORMATION

Toxicity:	
Biodegradability:	10-50 %
Bacterial Toxicity:	EC50: 100 mg/l (Inhibition of activated sludge) LC50: >100 mg/l (Inhibition of activated sludge)
AOX Content:	0.0%
AOX Potential:	.07%
COD:	1,287 mg/g

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste treatment methods:	
Disposal:	If utilization or recycling of the product is not possible, it should be disposed of in accordance with existing federal, state and local environmental regulations, e.g. by incineration in a suitable plant.
Container Disposal:	Soiled, empty containers are to be treated in the same way as the contents.

SECTION 14 - TRANSPORT INFORMATION

General Information:	The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT).
UN number:	Not relevant
UN proper shipping name:	Non-hazardous ink material
Transport hazard class:	Not relevant
Packing group:	Not relevant
Frt. Class Package:	55
Environmental Hazards:	
Environmentally hazardous substance:	No
Special precautions for user:	Not relevant



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SECTION 15 - REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:		
US Regulations		
TSCA Inventory:	The components of this product are listed on the TSCA Inventory	
SARA 313:	This product is not subject to SARA Title III Section 313 reporting requirements under 40 CFR 372.	
SARA 312:	Immediate (acute) health hazard	Yes
	Delayed (chronic) health hazard	No
	Fire hazard	No
	Sudden Release of Pressure	No
	Reactivity	No
California Proposition 65:	This product does NOT contain any components currently on the California List of Known Carcinogens and reproductive Toxins.	
A minor component (62%) of this dye can, by reductive cleavage of one or more AZO groups, release one or more of the aromatic amines listed in the Point 21 of annex to the commission decision 2002/371/EC.		4-Aminoazobenzene (60-09-3)
This product is not subject to the German Ordinance that bans certain AZO dyes or the 19 th Amendment of the Council Directive 76/769/EEC.		

SECTION 16 - OTHER INFORMATION

HMIS Hazard ID:	
Health:	1
Flammability:	1
Reactivity:	0
Personal Protection:	E (safety glasses, gloves and a dust respirator)
Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; *Chronic health effect	

Disclaimer:

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Revision Date: 03/02/2021

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)

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	Wassergefährdungsklasse (Water Hazard Class) WHMIS Workplace Hazardous Material Identification System

SAFETY DATA SHEET (SDS)



Citric Acid - Pg 1

Revision Date: 07/26/2018

SECTION 1 - CHEMICAL, PRODUCT & COMPANY INFORMATION

Product Name:	CITRIC ACID	
Product Number/Code:	CHM1022 / CHM2022	
Recommended Use:	Mild, powdered acid used to fix acid dyes and exhaust dye baths.	
Synonym(s):	Citric acid anhydrous	
Restrictions on use:	No uses advised against.	
Emergency Number:	ChemTel, Inc. - Contract #MIS9128344	
	North America: 1-800-255-3924	International: 1-813-248-0585

SECTION 2 - HAZARD(S) IDENTIFICATION

Label Elements (According to Regulation (EC) No. 1272/2008 & 453/2010 (CLP)):	
Pictogram:	
Signal Words:	Warning
Hazard Statements:	H319 Causes serious eye irritation.
Precautionary Statements:	
Prevention:	P264 Wash hands thoroughly after handling. P280 Wear eye protection.
Response:	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.
Label Elements (According to Directive 67/548/EEC & Directive 1999/45/EC):	
Hazard Symbol:	 Xi - Irritant
Risk Phrase(s):	R36 Irritating to eye.
Safety Phrase(s):	S26 Avoid contact with eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Other hazards:	Not known
Additional information:	Not known

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

Chemical identity	Content in percent (%)*	CAS #	EC:
Citric acid	99.5-100.5	77-92-9	201-069-1
<i>Mixture: not applicable</i>			

SECTION 4 - FIRST AID MEASURES

Description of first aid measures:	
In the event of skin contact:	Wash off immediately with plenty of water for at least 15 minutes. If irritation persists, call a physician.
In the event of eye contact:	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
In the event of swallowing:	Do NOT induce vomiting. Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. Consult a physician.
In the event of exposure by inhalation:	Move to fresh air.
Most important symptoms and effects, acute and delayed:	Serious eye damage/eye irritation. Eye Irrit. 2.
Indication of any immediate medical attention and special treatment needed:	Consult a physician.

SECTION 5 - FIREFIGHTING MEASURES

Suitable extinguishing media:	Use alcohol-resistant foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special hazards arising from the substance or mixture:	Oxides of carbon.
Advice for fire fighters:	In the event of fire, wear self-contained breathing apparatus and wear suitable protective clothing. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Additional information:	Explosion hazard from the generation of dust.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Use personal protective equipment.
Methods and material for containment and clean up:	Sweep up or vacuum up spillage and collect in suitable container for disposal.
Environmental procedures:	Do not flush substance into surface water or sewage system.
Reference to other sections:	Section 8
Additional information:	Not known

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Use personal protective equipment.
Methods and material for containment and clean up:	Sweep up or vacuum up spillage and collect in suitable container for disposal.
Environmental procedures:	Do not flush substance into surface water or sewage system.
Reference to other sections:	Section 8
Additional information:	Not known

SECTION 7 - HANDLING AND STORAGE

Precautions for safe handling:	Avoid contact with skin and eyes. Use only in well-ventilated areas. Do not breathe vapors/dust.
Conditions for safe storage including any incompatibilities:	Keep locked up or in an area accessible only to qualified staff. Store in a tightly closed original container in a dry, cool and well-ventilated place.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:		
Occupational exposure limits:	No values	
Exposure controls:	Minimize the risk of dust.	
PNECs and DNELs:	No true DNEL for systemic toxicity can be derived. Local effects irritation should be considered.	
PNEC/PEC - Environment:	Compartment:	PN:
	Aquatic PNEC aqua - freshwater (mg/l):	0.465
	PNEC aqua - marine water (mg/l):	0.0465
	PNEC freshwater - sediment (mg/kg d.w.):	3.52 (equivalent to 0.752 mg/kg ww)
	The PNEC marine - sediment (mg/kg d.w.):	35.2 (equivalent to 7.52 mg/kg ww)
	Terrestrial PNEC - soil (mg/kg d.w.):	34.2
	Sewage treatment plant PNEC STP (mg/l):	>1,050
	Atmospheric Compartment:	Not applicable
Appropriate engineering controls:	Provide adequate ventilation.	
Thermal hazards:	Not applicable	
Individual protection measures, such as personal protective equipment:		
Eye/face protection:	Safety glasses with side shields.	
Skin protection:	Avoid contact with skin, eyes and clothing. Wash hands before breaks and at the end of workday.	
Hand protection:	Protective gloves must satisfy the specifications of EU Directive 89/686/EEC and EN 374.	
Hygiene measures:	Do not smoke in the work area. Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. When using, do not eat, drink or smoke.	
Environmental exposure controls:	Do not allow to enter drains, sewers or watercourses.	
Respiratory protection:	Provide adequate ventilation. Wear respirator where dust level exceeds 10 mg/m ³ .	

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

General information:	
Appearance and physical state:	Solid, crystalline
Color:	White
Type of Odor:	Odourless
Odor threshold:	Odourless
Important health, safety and environmental information:	
Initial Boiling Point and Boiling Range:	Decomposes before boiling
Melting Point/Freezing Point:	Approximately 153°C at 1,013 hPa
Flammability Classification:	Non-flammable
Flash Point:	Not known
Auto-ignition Temperature:	N/A
Decomposition Temperature:	Not known
Flammability Limits (lower/upper):	N/A
Evaporation rate:	N/A
Vapor Pressure:	N/A
Vapor Density (Air=1):	N/A
Octanol/Water Partition Coefficient (log Pow):	-0.1 to -1.7
Specific Gravity:	N/A
Bulk Density:	N/A
Solubility (Water):	750 g/l at 20°C
Solubility (other):	Soluble in alcohol
pH:	1.75 (100 g/l)
Viscosity:	N/A
Explosive Properties:	Not explosive
Oxidizing Properties:	Not oxidizing
Molecular Formula:	N/A
Molecular Weight:	N/A
Relative Density:	1.542 g/cm ³ at 20°C
Granulometry:	The fraction below 100 µm = 84.1%; the D50 of the fraction below 100 µm = at 31.99 µm.
Dissociation constant:	pKa: 3.13, 4.76 and 6.4 at 25°C

SECTION 10 - STABILITY AND REACTIVITY

Reactivity:	Reacts with alkaline.
Stability:	Stable under normal conditions.
Conditions to avoid:	Exposure to heat, sparks and open flame.
Incompatible materials:	Sodium nitrite, potassium
Hazardous decomposition products:	Oxides of carbon.

SECTION 11 - TOXICOLOGICAL INFORMATION

Information on toxicological effects:	
Acute toxicity (list all possible routes of exposure)	
Acute Oral Toxicity:	LD50 (mouse): 5,050 mg/kg bw
Acute Dermal Toxicity:	LD50 (dermal): >1,845 mg/kg bw
Acute Inhalation Toxicity:	No data
Skin Corrosion/Irritation:	Mild skin irritant
Serious Eye Damage / Eye Irritation:	Irritating
Respiratory or Skin Sensitization:	Not a sensitizer
Germ Cell Mutagenicity:	Not a mutagen
Carcinogenicity:	Not a carcinogen
Reproductive Toxicity:	Not a reproductive toxin.
Specific Target Organ Toxicity - single exposure (STOT-se):	Not known
Specific Target Organ Toxicity - repeated exposure (STOT-re):	Not known
Aspiration Hazard:	Not known

SECTION 12 - ECOLOGICAL INFORMATION

Toxicity:	
Acute/prolonged toxicity to fish:	LC50 (fish - 48 hr): 415 mg/l
Acute/prolonged toxicity to aquatic invertebrates:	LC50 (D. Magna - 24 hr): 1,460 mg/l
Acute/prolonged toxicity to aquatic plants:	Algae NOEC (8 d mat. (nominal) based on cell density): 408 mg/l
Persistence and degradability:	Biodegradable
Bioaccumulative potential:	Not expected to bioaccumulate
Mobility in soil:	Not applicable
Results of PBT and vPvB assessment (EC reg. 453/2010):	Not a PBT or vPvB
Other adverse effects:	Not known

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste treatment methods:	
Disposal:	Disposal to licensed waste disposal site in accordance with local Waste Disposal Authority.
Additional information:	Not known

SECTION 14 - TRANSPORT INFORMATION

Land transport (ADR/RID):	Not subject to transport regulations.
Sea transport (IMDG):	Not subject to transport regulations.
Air transport (ICAO/IATA):	Not subject to transport regulations.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code.	Not known

SECTION 15 - REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:	
Hazard categories	
EU regulations:	User to follow EU directives and regulations
Authorizations and/or restrictions on use:	Not applicable
National regulations:	User to follow national regulations.
US. California Proposition 65	No ingredient regulated by CA Prop 65 present.

SECTION 16 - OTHER INFORMATION

LEGEND:	
LTEL:	Long Term Exposure Limit
STEL:	Short Term Exposure Limit
STOT:	Specific Target Organ Toxicity
DNEL:	Derived No Effect Level
PNEC	Predicted No Effect Concentration
References:	Chemical Safety Report for citric acid and citrates Regulation (EC) No. 1272/2008 & 453/2010 (CLP) Directive (67/548/EEC & Directive 1999/45/EC
Risk Phrases & Safety Phrases:	R36: Irritating to eyes. S26: Avoid contact with eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Hazard statement(s) and Precautionary statement(s):	H319: Causes serious eye irritation. P264: Wash hands thoroughly after handling. P280: Wear eye protection. 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.
Training advice:	Ensure staff and workers receive adequate training with regular updates in the handling of chemicals.
Additional information:	Not known

Disclaimer:

The information contained in this SDS is based on data from sources considered to be reliable but Dharma Trading Co. does not guarantee the accuracy or completeness thereof. Dharma Trading Co. 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: 07/26/2018

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	Wassergefährdungsklasse (Water Hazard Class) WHMIS Workplace Hazardous Material Identification System