

## Kit Summary

**Product Code(s)** AB150667  
**Product name** Elastic Stain Kit (Verhoeff Van Gieson / EVG Stain)

### Hematoxylin solution (5%)

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
Ethanol	200-578-6	64-17-5	90	Flam. Liq. 2 (H225)	-
Isopropanol	200-661-7	67-63-0	5	STOT SE 3 (H336) Eye Irrit. 2 (H319) Flam Liq. 2 (H225)	-
Haematoxylin	-	517-28-2	5	Eye Irrit. 2 (H319)	-

### Lugol's Iodine Solution

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
Potassium Iodide	231-659-4	7681-11-0	4	STOT RE 1 (H372)	-
Iodine	231-442-4	7553-56-2	2	Acute Tox. 4 (H312) Acute Tox. 4 (H332) Aquatic Acute 1 (H400)	-

### Van Gieson's Solution

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
Picric Acid	201-865-9	88-89-1	2	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Expl. 1.1; (H201)	-

### Ferric Chloride Solution (10%)

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
Ferric chloride hexahydrate	-	10025-77-1	10	Skin Corr. 1B (H314) Acute Tox. 4 (H302) Aquatic Chronic 3 (H412)	-

### Ferric Chloride (2%) Differentiating Solution

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
Ferric chloride hexahydrate	-	10025-77-1	2	Skin Corr. 1B (H314) Acute Tox. 4 (H302) Aquatic Chronic 3 (H412)	-

### GHS / CLP - GHS - Classification

**Signal Word**

Danger

**Hazard statements**

H225 - Highly flammable liquid and vapor

H314 - Causes severe skin burns and eye damage

H319 - Causes serious eye irritation

H315 - Causes skin irritation

H373 - May cause damage to organs through prolonged or repeated exposure.

**Precautionary Statements - EU (§28, 1272/2008)**

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

P280 - Wear protective gloves/ eye protection/ face protection

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

P363 - Wash contaminated clothing 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

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

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower

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

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

P310 - Immediately call a POISON CENTER or doctor/ physician

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P333 + P313 - If skin irritation or rash occurs: Get medical advice/ attention

P370 + P378 - In case of fire: Use foam for extinction

P233 - Keep container tightly closed

P403 + P235 - Store in a well-ventilated place. Keep cool

P405 - Store locked up

P501 - Dispose of contents/ container to an approved waste disposal plant

**2.3 Other information**

A safety datasheet follows for all potentially hazardous components – all other components are non-hazardous.

**TRANSPORT INFORMATION**

<b>DOT</b>	Limited Quantity
<b>Proper shipping name</b>	Chemical kit
<b>Hazard class</b>	9
<b>UN/ID No</b>	UN3316
<b>Packing group</b>	II

<b>IATA</b>	Limited Quantity
<b>UN/ID No</b>	UN3316
<b>Proper shipping name</b>	Chemical kit
<b>Hazard class</b>	9

**Packing group**

II

**ADR**

**Proper shipping name**

Limited Quantity

**Hazard class**

Chemical kit

**UN/ID No**

9

**Packing group**

UN3316

II

# Safety Data Sheet

Issuing date No data available

Revision Date 11-Aug-2020

Version 8

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name** Hematoxylin solution (5%)

**UN/ID No** UN1170

**Recommended use** For research use only

**Supplier Address** Abcam Inc  
1 Kendall Square, Ste 341  
Cambridge, MA 02139-1517  
USA  
Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)  
Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)

**E-mail address** technical@abcam.com

**Emergency telephone** +1 866 928 0789 (Toll free) /+1 202 464 2554

## 2. HAZARDS IDENTIFICATION

### GHS - Classification

Serious eye damage/eye irritation	Category 2
Flammable liquids	Category 2

### GHS Label elements, including precautionary statements



**Signal Word**  
Danger

### Hazard statements

H225 - Highly flammable liquid and vapor  
H319 - Causes serious eye irritation

**Precautionary Statements - EU (§28, 1272/2008)**

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

P280 - Wear protective gloves/ eye protection/ face protection

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

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

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower

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

P370 + P378 - In case of fire: Use foam for extinction

P403 + P235 - Store in a well-ventilated place. Keep cool

P233 - Keep container tightly closed

P501 - Dispose of contents/ container to an approved waste disposal plant

**Other information**

No information available

**3. COMPOSITION/INFORMATION ON INGREDIENTS****3.1 Substances**

Chemical Name	CAS-No	Weight %	Classification (Reg. 1272/2008)
Ethanol	64-17-5	85-90	Flam. Liq. 2 (H225)
Isopropanol	67-63-0	3-7	STOT SE 3 (H336) Eye Irrit. 2 (H319) Flam Liq. 2 (H225)
Haematoxylin	517-28-2	3-7	Eye Irrit. 2 (H319)

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

**4. FIRST AID MEASURES**

<b>General advice</b>	If symptoms persist, call a physician.
<b>Eye contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If symptoms persist, call a physician.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.
<b>Inhalation</b>	Move to fresh air. If symptoms persist, call a physician.
<b>Ingestion</b>	Rinse mouth. If symptoms persist, call a physician.
<b>Notes to physician</b>	Treat symptomatically.

**5. FIRE-FIGHTING MEASURES**

**Flammable properties** Not flammable.

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<b>Flash point</b>	not determined
<b>Suitable extinguishing media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Explosion Data</b>	
<b>Sensitivity to Mechanical Impact</b>	None.
<b>Sensitivity to Static Discharge</b>	None.
<b>Protective equipment and precautions for firefighters</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions</b>	Use personal protective equipment. Avoid contact with the skin and the eyes. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
<b>Environmental precautions</b>	Try to prevent the material from entering drains or water courses.
<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. After cleaning, flush away traces with water. Prevent product from entering drains. Dam up.

## 7. HANDLING AND STORAGE

<b>Advice on safe handling</b>	Ensure adequate ventilation. Wear personal protective equipment. Use only in area provided with appropriate exhaust ventilation. Do not breathe vapors or spray mist.
<b>Technical measures/Storage conditions</b>	Keep container tightly closed. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Exposure Guidelines** This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethanol 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup> (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m <sup>3</sup>	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup>
Isopropanol 67-63-0	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm TWA: 980 mg/m <sup>3</sup> (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m <sup>3</sup> (vacated) STEL: 500 ppm (vacated) STEL: 1225 mg/m <sup>3</sup>	IDLH: 2000 ppm TWA: 400 ppm TWA: 980 mg/m <sup>3</sup> STEL: 500 ppm STEL: 1225 mg/m <sup>3</sup>

NIOSH IDLH: Immediately Dangerous to Life or Health

**Engineering measures** Showers  
Eyewash stations  
Ventilation systems

**Personal protective equipment**

**Eye/face protection** Tightly fitting safety goggles. Face-shield.  
**Skin and body protection** Long sleeved clothing. Protective gloves.  
**Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**Hygiene measures** When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	No information available.	<b>Odor</b>	No information available.
<b>Odor Threshold</b>	No information available	<b>Physical State @20°C</b>	Liquid
<b>pH</b>	No information available	<b>Autoignition temperature</b>	No information available
<b>Flash point</b>	No information available	<b>Boiling point/boiling range</b>	No information available
<b>Decomposition temperature</b>	No information available	<b>Flammability Limits in Air</b>	No information available
<b>Melting point/range</b>	No information available	<b>solubility</b>	No information available.
<b>Explosion limits</b>	No information available	<b>Vapor Pressure @20°C (kPa)</b>	No information available
<b>Specific Gravity</b>	No data available	<b>VOC Content(%)</b>	95.1999998092651
<b>Evaporation rate</b>	No information available		
<b>Vapor density</b>	No data available		

**10. STABILITY AND REACTIVITY**

**Stability** Stable under recommended storage conditions.  
**Incompatible products** None known based on information supplied.  
**Conditions to avoid** None known based on information supplied.  
**Hazardous decomposition products** None known based on information supplied.  
**Hazardous polymerization** Hazardous polymerization does not occur.

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

**Product Information** Irritating to skin, eyes and / or respiratory tract.

**Eye contact** May cause irritation

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethanol	7060 mg/kg ( Rat )		124.7 mg/L ( Rat ) 4 h
Isopropanol	4396 mg/kg ( Rat )	12800 mg/kg ( Rat ) 12870 mg/kg ( Rabbit )	72.6 mg/L ( Rat ) 4 h

### Chronic toxicity

**Chronic toxicity** Avoid repeated exposure May cause adverse liver effects Contains a known or suspected reproductive toxin

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethanol	A3		Known	X
Isopropanol		Group 1 Group 3		X

**ACGIH: (American Conference of Governmental Industrial Hygienists)**

A3 - Animal Carcinogen

**IARC: (International Agency for Research on Cancer)**

Group 1 - Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

**NTP: (National Toxicity Program)**

Known - Known Carcinogen

**OSHA: (Occupational Safety & Health Administration)**

X - Present

**Target Organ Effects** None known.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Ethanol		12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 100: 96 h Pimephales promelas mg/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through		9268 - 14221: 48 h Daphnia magna mg/L LC50 10800: 24 h Daphnia magna mg/L EC50 2: 48 h Daphnia magna mg/L EC50 Static
Isopropanol	1000: 96 h Desmodesmus subspicatus mg/L EC50 1000: 72 h Desmodesmus subspicatus mg/L EC50	9640: 96 h Pimephales promelas mg/L LC50 flow-through 11130: 96 h Pimephales promelas mg/L LC50 static 1400000: 96 h Lepomis macrochirus µg/L LC50		13299: 48 h Daphnia magna mg/L EC50
Chemical Name			log Pow	
Ethanol			-0.32	
Isopropanol			0.05	



**13. DISPOSAL CONSIDERATIONS**

**Waste disposal methods** Dispose of in accordance with federal, state, and local regulations.

**Contaminated packaging** Do not re-use empty containers.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Ethanol	Toxic Ignitable
Isopropanol	Toxic Ignitable

**14. TRANSPORT INFORMATION**

**DOT** Limited Quantity  
**Proper shipping name** Ethanol solution  
**Hazard class** 3  
**UN/ID No** UN1170  
**Packing group** II

**IATA** Limited Quantity  
**UN/ID No** UN1170  
**Proper shipping name** Ethanol solution  
**Hazard class** 3  
**Packing group** II

**ADR** Limited Quantity  
**Proper shipping name** Ethanol solution  
**Hazard class** 3  
**UN/ID No** UN1170  
**Packing group** II

**15. REGULATORY INFORMATION**

**U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Isopropanol	67-63-0	4.7	1.0

**SARA 311/312 Hazard Categories**

**Acute Health Hazard** yes  
**Chronic Health Hazard** no  
**Fire Hazard** no  
**Sudden Release of Pressure Hazard** no  
**Reactive Hazard** no

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**U.S. State Regulations****California Proposition 65**

This product contains the following Proposition 65 chemicals:

Chemical Name	CAS-No	California Prop. 65
Ethanol	64-17-5	Carcinogen Developmental

**U.S. State Right-to-Know Regulations**

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Ethanol	X	X	X		X
Isopropanol	X	X	X		X

**International Regulations**

Chemical Name	Carcinogen Status	Exposure limits
Ethanol		Mexico: TWA 1000 ppm Mexico: TWA 1900 mg/m <sup>3</sup>
Isopropanol		Mexico: TWA 400 ppm Mexico: TWA 980 mg/m <sup>3</sup> Mexico: STEL 500 ppm Mexico: STEL 1225 mg/m <sup>3</sup>

**WHMIS Note:**

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

**16. OTHER INFORMATION****Full text of H-Statements referred to under sections 2 and 3**

H225 - Highly flammable liquid and vapor H319 - Causes serious eye irritation H336 - May cause drowsiness or dizziness

**Hazard statements**

H225 - Highly flammable liquid and vapor

H319 - Causes serious eye irritation

**Revision Date** 11-Aug-2020

**Revision Note** No information available.

**Disclaimer**

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 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.

**End of MSDS**

# Safety Data Sheet

Issuing date No data available

Revision Date 11-Aug-2020

Version 7

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name** Lugol's Iodine Solution

**Recommended use** For research use only

**Supplier Address** Abcam Inc  
1 Kendall Square, Ste 341  
Cambridge, MA 02139-1517  
USA  
Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)  
Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)

**E-mail address** technical@abcam.com

**Emergency telephone** +1 866 928 0789 (Toll free) /+1 202 464 2554

## 2. HAZARDS IDENTIFICATION

### GHS - Classification

Specific target organ systemic toxicity (repeated exposure)	Category 2
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### GHS Label elements, including precautionary statements



### Signal Word

Warning

### Hazard statements

H373 - May cause damage to organs through prolonged or repeated exposure

### Precautionary Statements - EU (§28, 1272/2008)

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P314 - Get medical advice/ attention if you feel unwell

P501 - Dispose of contents/ container to an approved waste disposal plant

### Other information

No information available

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

Chemical Name	CAS-No	Weight %	Classification (Reg. 1272/2008)
Potassium Iodide	7681-11-0	1-5	STOT RE 1 (H372)
Iodine	7553-56-2	1-5	Acute Tox. 4 (H312) Acute Tox. 4 (H332) Aquatic Acute 1 (H400)

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

### 4. FIRST AID MEASURES

<b>Eye contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
<b>Inhalation</b>	Move to fresh air.
<b>Ingestion</b>	Clean mouth with water. Drink plenty of water.
<b>Notes to physician</b>	Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

<b>Flammable properties</b>	Not flammable.
<b>Flash point</b>	not determined
<b>Suitable extinguishing media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Explosion Data</b>	
<b>Sensitivity to Mechanical Impact</b>	None.
<b>Sensitivity to Static Discharge</b>	None.
<b>Protective equipment and precautions for firefighters</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes.

**6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions**                      Ensure adequate ventilation.
- Environmental precautions**            Try to prevent the material from entering drains or water courses.
- Methods for containment**                Prevent further leakage or spillage if safe to do so.
- Methods for cleaning up**                Cover liquid spill with sand, earth or other noncombustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading. Pick up and transfer to properly labeled containers.

**7. HANDLING AND STORAGE**

- Advice on safe handling**                Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Remove and wash contaminated clothing before re-use. Do not breathe vapors or spray mist. Do not eat, drink or smoke when using this product.
- Technical measures/Storage conditions**    Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Exposure Guidelines**                      This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Potassium Iodide 7681-11-0	TWA: 0.01 ppm inhalable fraction and vapor		
Iodine 7553-56-2	STEL: 0.1 ppm aerosol and vapor TWA: 0.01 ppm inhalable fraction and vapor	(vacated) Ceiling: 0.1 ppm (vacated) Ceiling: 1 mg/m <sup>3</sup> Ceiling: 0.1 ppm Ceiling: 1 mg/m <sup>3</sup>	IDLH: 2 ppm Ceiling: 0.1 ppm Ceiling: 1 mg/m <sup>3</sup>

*NIOSH IDLH: Immediately Dangerous to Life or Health*

- Other Exposure Guidelines**            Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).
- Engineering measures**                 Showers  
Eyewash stations  
Ventilation systems
- Personal protective equipment**
  - Eye/face protection**                    Tightly fitting safety goggles.
  - Skin and body protection**            Long sleeved clothing. Protective gloves.
  - Respiratory protection**                If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
- Hygiene measures**                        Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	No information available.	<b>Odor</b>	No information available.
<b>Odor Threshold</b>	No information available	<b>Physical State @20°C</b>	Liquid
<b>pH</b>	No information available	<b>Autoignition temperature</b>	No information available
<b>Flash point</b>	No information available	<b>Boiling point/boiling range</b>	No information available
<b>Decomposition temperature</b>	No information available	<b>Flammability Limits in Air</b>	No information available
<b>Melting point/range</b>	No information available		
<b>Explosion limits</b>	No information available		
<b>Specific Gravity</b>	No data available	<b>solubility</b>	No information available.
<b>Evaporation rate</b>	No information available	<b>Vapor Pressure @20°C (kPa)</b>	No information available
<b>Vapor density</b>	No data available	<b>VOC Content(%)</b>	Not applicable

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under recommended storage conditions.
<b>Incompatible products</b>	None known based on information supplied.
<b>Conditions to avoid</b>	None known based on information supplied.
<b>Hazardous decomposition products</b>	None known based on information supplied.
<b>Hazardous polymerization</b>	Hazardous polymerization does not occur.

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

**Product Information** Product does not present an acute toxicity hazard based on known or supplied information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Iodine	14 g/kg ( Rat )		

### Chronic toxicity

**Target Organ Effects** Thyroid.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

The environmental impact of this product has not been fully investigated.

## 13. DISPOSAL CONSIDERATIONS

**Waste disposal methods** Dispose of in accordance with federal, state, and local regulations.

**Contaminated packaging** Do not re-use empty containers.

## 14. TRANSPORT INFORMATION

**DOT** Not dangerous goods

**IATA** Not dangerous goods

**ADR** Not dangerous goods

**15. REGULATORY INFORMATION**

**U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	no
<b>Chronic Health Hazard</b>	yes
<b>Fire Hazard</b>	no
<b>Sudden Release of Pressure Hazard</b>	no
<b>Reactive Hazard</b>	no

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**U.S. State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Iodine	X	X	X		X

**International Regulations**

Chemical Name	Carcinogen Status	Exposure limits
Iodine		Mexico: Ceiling 0.1 ppm Mexico: Ceiling 1 mg/m <sup>3</sup>

**WHMIS Note:**

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

**16. OTHER INFORMATION****Full text of H-Statements referred to under sections 2 and 3**

H372 - Causes damage to organs through prolonged or repeated exposure  
H312 + H332 - Harmful in contact with skin or if inhaled  
H400 - Very toxic to aquatic life

**Hazard statements**

H373 - May cause damage to organs through prolonged or repeated exposure

**Revision Date** 11-Aug-2020

**Revision Note** No information available.

**Disclaimer**

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**End of MSDS**



# Safety Data Sheet

Issuing date No data available

Revision Date 11-Aug-2020

Version 7

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name** Van Gieson's Solution  
**Recommended use** For research use only  
**Supplier Address** Abcam Inc  
 1 Kendall Square, Ste 341  
 Cambridge, MA 02139-1517  
 USA  
 Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)  
 Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)  
**E-mail address** technical@abcam.com  
**Emergency telephone** +1 866 928 0789 (Toll free) /+1 202 464 2554

## 2. HAZARDS IDENTIFICATION

### GHS - Classification

Ozone	Not applicable
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### GHS Label elements, including precautionary statements

Not dangerous

### Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves/ protective clothing

### Other information

No information available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Chemical Name	CAS-No	Weight %	Classification (Reg. 1272/2008)
Picric Acid	88-89-1	1-5	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Expl. 1.1; (H201)

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

#### 4. FIRST AID MEASURES

<b>Eye contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
<b>Inhalation</b>	Move to fresh air.
<b>Ingestion</b>	Clean mouth with water. Drink plenty of water.
<b>Notes to physician</b>	Treat symptomatically.

#### 5. FIRE-FIGHTING MEASURES

<b>Flammable properties</b>	Not flammable.
<b>Flash point</b>	not determined
<b>Suitable extinguishing media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Explosion Data</b>	
<b>Sensitivity to Mechanical Impact</b>	None.
<b>Sensitivity to Static Discharge</b>	None.
<b>Protective equipment and precautions for firefighters</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes.

#### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions</b>	Ensure adequate ventilation.
<b>Environmental precautions</b>	Try to prevent the material from entering drains or water courses.
<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Pick up and transfer to properly labeled containers.

#### 7. HANDLING AND STORAGE

<b>Advice on safe handling</b>	Handle in accordance with good industrial hygiene and safety practice.
<b>Technical measures/Storage conditions</b>	Keep containers tightly closed in a dry, cool and well-ventilated place.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Exposure Guidelines** This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Picric Acid 88-89-1	TWA: 0.1 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup> (vacated) TWA: 0.1 mg/m <sup>3</sup> (vacated) S* S*	IDLH: 75 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup> STEL: 0.3 mg/m <sup>3</sup>

NIOSH IDLH: *Immediately Dangerous to Life or Health*

**Other Exposure Guidelines** Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

**Engineering measures** Showers  
Eyewash stations  
Ventilation systems

**Personal protective equipment**

- Eye/face protection** Tightly fitting safety goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
- Skin and body protection** Long sleeved clothing. Protective gloves.
- Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**Hygiene measures** Handle in accordance with good industrial hygiene and safety practice.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	No information available.	<b>Odor</b>	No information available.
<b>Odor Threshold</b>	No information available	<b>Physical State @20°C</b>	Liquid
<b>pH</b>	No information available	<b>Autoignition temperature</b>	No information available
<b>Flash point</b>	No information available	<b>Boiling point/boiling range</b>	No information available
<b>Decomposition temperature</b>	No information available	<b>Flammability Limits in Air</b>	No information available
<b>Melting point/range</b>	No information available	<b>solubility</b>	No information available.
<b>Explosion limits</b>	No information available	<b>Vapor Pressure @20°C (kPa)</b>	No information available
<b>Specific Gravity</b>	No data available	<b>VOC Content(%)</b>	Not applicable
<b>Evaporation rate</b>	No information available		
<b>Vapor density</b>	No data available		

**10. STABILITY AND REACTIVITY**

**Stability** Stable under recommended storage conditions.

**Incompatible products** None known based on information supplied.

**Conditions to avoid** None known based on information supplied.

**Hazardous decomposition products** None known based on information supplied.

**Hazardous polymerization** Hazardous polymerization does not occur.

**11. TOXICOLOGICAL INFORMATION**

**Acute toxicity**

**Product Information** Product does not present an acute toxicity hazard based on known or supplied information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Picric Acid	200 mg/kg ( Rat )		

**Chronic toxicity**

**Chronic toxicity** May cause adverse liver effects

**Target Organ Effects** None known.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

The environmental impact of this product has not been fully investigated.

**13. DISPOSAL CONSIDERATIONS**

**Waste disposal methods** Dispose of in accordance with federal, state, and local regulations.

**Contaminated packaging** Do not re-use empty containers.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Picric Acid	Ignitable Reactive

**14. TRANSPORT INFORMATION**

**DOT** Not dangerous goods

**IATA** Not dangerous goods

**ADR** Not dangerous goods

**15. REGULATORY INFORMATION**

**U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

**SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	no
<b>Chronic Health Hazard</b>	no
<b>Fire Hazard</b>	no
<b>Sudden Release of Pressure Hazard</b>	no
<b>Reactive Hazard</b>	no

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**U.S. State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Picric Acid	X	X	X		X

**International Regulations**

Chemical Name	Carcinogen Status	Exposure limits
Picric Acid		Mexico: TWA 0.1 mg/m <sup>3</sup> Mexico: STEL 0.3 mg/m <sup>3</sup>

**WHMIS Note:**

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

**16. OTHER INFORMATION****Full text of H-Statements referred to under sections 2 and 3**

H201 - Explosive; mass explosion hazard H301 + H311 + H331 - Toxic if swallowed, in contact with skin or if inhaled

**Revision Date**

11-Aug-2020

**Revision Note**

No information available.

**Disclaimer**

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 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.

**End of MSDS**

# Safety Data Sheet

Issuing date No data available

Revision Date 11-Aug-2020

Version 8

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name** Ferric Chloride Solution (10%)

**UN/ID No** UN2582

**Recommended use** For research use only

**Supplier Address** Abcam Inc  
1 Kendall Square, Ste 341  
Cambridge, MA 02139-1517  
USA  
Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)  
Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)

**E-mail address** technical@abcam.com

**Emergency telephone** +1 866 928 0789 (Toll free) /+1 202 464 2554

## 2. HAZARDS IDENTIFICATION

### GHS - Classification

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

### GHS Label elements, including precautionary statements



**Signal Word**  
Danger

**Hazard statements**  
H314 - Causes severe skin burns and eye damage

**Precautionary Statements - EU (§28, 1272/2008)**

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

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P280 - Wear protective gloves/ eye protection/ face protection

P363 - Wash contaminated clothing before reuse

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

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower

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

P310 - Immediately call a POISON CENTER or doctor/ physician

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

P405 - Store locked up

P501 - Dispose of contents/ container to an approved waste disposal plant

**Other information**

No information available

**3. COMPOSITION/INFORMATION ON INGREDIENTS****3.1 Substances**

Chemical Name	CAS-No	Weight %	Classification (Reg. 1272/2008)
Ferric chloride hexahydrate	10025-77-1	7-13	Skin Corr. 1B (H314) Acute Tox. 4 (H302) Aquatic Chronic 3 (H412)

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

**4. FIRST AID MEASURES**

<b>General advice</b>	If symptoms persist, call a physician. Immediate medical attention is required.
<b>Eye contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Immediate medical attention is required.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.
<b>Inhalation</b>	Move to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Immediate medical attention is required.
<b>Ingestion</b>	Rinse mouth. If symptoms persist, call a physician. Do NOT induce vomiting. Immediate medical attention is required.
<b>Notes to physician</b>	Treat symptomatically.
<b>Protection of first-aiders</b>	Use personal protective equipment. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**5. FIRE-FIGHTING MEASURES**

<b>Flammable properties</b>	Not flammable.
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<b>Flash point</b>	not determined
<b>Suitable extinguishing media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Explosion Data</b>	
<b>Sensitivity to Mechanical Impact</b>	None.
<b>Sensitivity to Static Discharge</b>	None.
<b>Protective equipment and precautions for firefighters</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions</b>	Use personal protective equipment. Avoid contact with the skin and the eyes. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
<b>Environmental precautions</b>	Try to prevent the material from entering drains or water courses.
<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. After cleaning, flush away traces with water. Prevent product from entering drains. Dam up.

## 7. HANDLING AND STORAGE

<b>Advice on safe handling</b>	Ensure adequate ventilation. Wear personal protective equipment. Use only in area provided with appropriate exhaust ventilation. Do not breathe vapors or spray mist.
<b>Technical measures/Storage conditions</b>	Keep container tightly closed. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Exposure Guidelines</b>	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
<b>Engineering measures</b>	Showers Eyewash stations Ventilation systems
<b>Personal protective equipment</b>	
<b>Eye/face protection</b>	Tightly fitting safety goggles. Face-shield.
<b>Skin and body protection</b>	Long sleeved clothing. Protective gloves.
<b>Respiratory protection</b>	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
<b>Hygiene measures</b>	When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing.



## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	No information available.	<b>Odor</b>	No information available.
<b>Odor Threshold</b>	No information available	<b>Physical State @20°C</b>	Liquid
<b>pH</b>	No information available		
<b>Flash point</b>	No information available	<b>Autoignition temperature</b>	No information available
<b>Decomposition temperature</b>	No information available	<b>Boiling point/boiling range</b>	No information available
<b>Melting point/range</b>	No information available		
		<b>Flammability Limits in Air</b>	No information available
<b>Explosion limits</b>	No information available		
		<b>solubility</b>	No information available.
<b>Specific Gravity</b>	No data available	<b>Vapor Pressure @20°C (kPa)</b>	No information available
<b>Evaporation rate</b>	No information available	<b>VOC Content(%)</b>	Not applicable
<b>Vapor density</b>	No data available		

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under recommended storage conditions.
<b>Incompatible products</b>	None known based on information supplied.
<b>Conditions to avoid</b>	None known based on information supplied.
<b>Hazardous decomposition products</b>	None known based on information supplied.
<b>Hazardous polymerization</b>	Hazardous polymerization does not occur.

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

<b>Product Information</b>	Harmful if swallowed Corrosive to skin, eyes and/or respiratory tract.
<b>Eye contact</b>	Causes burns Corrosive to eyes
<b>Skin contact</b>	Corrosive Causes burns

### Chronic toxicity

<b>Chronic toxicity</b>	Avoid repeated exposure
<b>Target Organ Effects</b>	None known.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

The environmental impact of this product has not been fully investigated.

**13. DISPOSAL CONSIDERATIONS**

**Waste disposal methods** Dispose of in accordance with federal, state, and local regulations.

**Contaminated packaging** Do not re-use empty containers.

**14. TRANSPORT INFORMATION**

**DOT** Limited Quantity

**Proper shipping name** Ferric chloride solution

**Hazard class** 8

**UN/ID No** UN2582

**Packing group** III

**IATA** Limited Quantity

**UN/ID No** UN2582

**Proper shipping name** Ferric chloride solution

**Hazard class** 8

**Packing group** III

**ADR** Limited Quantity

**Proper shipping name** Ferric chloride solution

**Hazard class** 8

**UN/ID No** UN2582

**Packing group** III

**15. REGULATORY INFORMATION**

**U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	yes
<b>Chronic Health Hazard</b>	no
<b>Fire Hazard</b>	no
<b>Sudden Release of Pressure Hazard</b>	no
<b>Reactive Hazard</b>	no

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**U.S. State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

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**U.S. State Right-to-Know Regulations****International Regulations****WHMIS Note:**

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

**16. OTHER INFORMATION****Full text of H-Statements referred to under sections 2 and 3**

H302 - Harmful if swallowed H314 - Causes severe skin burns and eye damage H412 - Harmful to aquatic life with long lasting effects

**Hazard statements**

H314 - Causes severe skin burns and eye damage

**Revision Date** 11-Aug-2020

**Revision Note** No information available.

**Disclaimer**

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 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.

**End of MSDS**

# Safety Data Sheet

Issuing date No data available

Revision Date 11-Aug-2020

Version 8

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name** Ferric Chloride (2%) Differentiating Solution

**Recommended use** For research use only

**Supplier Address** Abcam Inc  
1 Kendall Square, Ste 341  
Cambridge, MA 02139-1517  
USA  
Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)  
Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)

**E-mail address** technical@abcam.com

**Emergency telephone** +1 866 928 0789 (Toll free) /+1 202 464 2554

## 2. HAZARDS IDENTIFICATION

### GHS - Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2

### GHS Label elements, including precautionary statements



### Signal Word

Warning

### Hazard statements

H315 - Causes skin irritation

H319 - Causes serious eye irritation

**Precautionary Statements - EU (§28, 1272/2008)**

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

P280 - Wear protective gloves/ eye protection/ face protection

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

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

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P333 + P313 - If skin irritation or rash occurs: Get medical advice/ attention

**Other information**

No information available

**3. COMPOSITION/INFORMATION ON INGREDIENTS****3.1 Substances**

Chemical Name	CAS-No	Weight %	Classification (Reg. 1272/2008)
Ferric chloride hexahydrate	10025-77-1	1-5	Skin Corr. 1B (H314) Acute Tox. 4 (H302) Aquatic Chronic 3 (H412)

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

**4. FIRST AID MEASURES**

<b>General advice</b>	If symptoms persist, call a physician.
<b>Eye contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If symptoms persist, call a physician.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.
<b>Inhalation</b>	Move to fresh air. If symptoms persist, call a physician.
<b>Ingestion</b>	Rinse mouth. If symptoms persist, call a physician.
<b>Notes to physician</b>	Treat symptomatically.

**5. FIRE-FIGHTING MEASURES**

<b>Flammable properties</b>	Not flammable.
<b>Flash point</b>	not determined
<b>Suitable extinguishing media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Explosion Data</b>	
<b>Sensitivity to Mechanical Impact</b>	None.

<b>Sensitivity to Static Discharge</b>	None.
<b>Protective equipment and precautions for firefighters</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions</b>	Ensure adequate ventilation.
<b>Environmental precautions</b>	Try to prevent the material from entering drains or water courses.
<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Pick up and transfer to properly labeled containers.

## 7. HANDLING AND STORAGE

<b>Advice on safe handling</b>	Handle in accordance with good industrial hygiene and safety practice.
<b>Technical measures/Storage conditions</b>	Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Exposure Guidelines</b>	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
<b>Engineering measures</b>	Showers Eyewash stations Ventilation systems
<b>Personal protective equipment</b>	
<b>Eye/face protection</b>	Tightly fitting safety goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
<b>Skin and body protection</b>	Long sleeved clothing. Protective gloves.
<b>Respiratory protection</b>	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
<b>Hygiene measures</b>	Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	No information available.	<b>Odor</b>	No information available.
<b>Odor Threshold</b>	No information available	<b>Physical State @20°C</b>	Liquid
<b>pH</b>	No information available		
<b>Flash point</b>	No information available	<b>Autoignition temperature</b>	No information available
<b>Decomposition temperature</b>	No information available	<b>Boiling point/boiling range</b>	No information available
<b>Melting point/range</b>	No information available		
		<b>Flammability Limits in Air</b>	No information available
<b>Explosion limits</b>	No information available		
<b>Specific Gravity</b>	No data available	<b>solubility</b>	No information available.
<b>Evaporation rate</b>	No information available	<b>Vapor Pressure @20°C (kPa)</b>	No information available
<b>Vapor density</b>	No data available	<b>VOC Content(%)</b>	Not applicable

**10. STABILITY AND REACTIVITY**

<b>Stability</b>	Stable under recommended storage conditions.
<b>Incompatible products</b>	None known based on information supplied.
<b>Conditions to avoid</b>	None known based on information supplied.
<b>Hazardous decomposition products</b>	None known based on information supplied.
<b>Hazardous polymerization</b>	Hazardous polymerization does not occur.

**11. TOXICOLOGICAL INFORMATION****Acute toxicity**

<b>Product Information</b>	Harmful if swallowed Irritating to skin, eyes and / or respiratory tract.
<b>Eye contact</b>	May cause irritation
<b>Skin contact</b>	May cause irritation

**Chronic toxicity**

<b>Target Organ Effects</b>	None known.
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**12. ECOLOGICAL INFORMATION****Ecotoxicity**

The environmental impact of this product has not been fully investigated.

**13. DISPOSAL CONSIDERATIONS**

<b>Waste disposal methods</b>	Dispose of in accordance with federal, state, and local regulations.
<b>Contaminated packaging</b>	Do not re-use empty containers.

**14. TRANSPORT INFORMATION**

<b><u>DOT</u></b>	Not dangerous goods
<b><u>IATA</u></b>	Not dangerous goods
<b><u>ADR</u></b>	Not dangerous goods

**15. REGULATORY INFORMATION****U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	yes
<b>Chronic Health Hazard</b>	no
<b>Fire Hazard</b>	no
<b>Sudden Release of Pressure Hazard</b>	no
<b>Reactive Hazard</b>	no

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**U.S. State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations****International Regulations****WHMIS Note:**

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

**16. OTHER INFORMATION****Full text of H-Statements referred to under sections 2 and 3**

H314 - Causes severe skin burns and eye damage H302 - Harmful if swallowed H412 - Harmful to aquatic life with long lasting effects

**Hazard statements**

H315 - Causes skin irritation

H319 - Causes serious eye irritation

**Revision Date** 11-Aug-2020

**Revision Note** No information available.

**Disclaimer**

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 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.

**End of MSDS**