

SAFETY DATA SHEET



Revision date 21-Oct-2020

Revision Number 1

Elastic Stain Kit

Item: 87017

<u>Component</u>	<u>Item number</u>
Sodium thiosulfate solution	88000B
Alcoholic Hematoxylin	88007B
Ferric Chloride	88008B
Wegert's Iodine Solution	88009B
Chromaview Van Geison	88011B

This safety data sheet was created pursuant to the requirements of: Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Issuing Date 10-Nov-2014

Revision date 23-Apr-2020

Revision Number 2

1. Identification

1.1. Product identifier

Catalogue Number 88025, 88000
Product Name Sodium thiosulfate solution
Pure substance/mixture Substance

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use In vitro diagnostics
Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Manufacturer

Richard-Allan Scientific
4481 Campus Drive
Kalamazoo, MI 49008
1-800-522-7270

For further information, please contact

1.4. Emergency telephone number

Emergency Telephone No information available

Emergency Telephone - §45 - (EC)1272/2008

Europe	112
Austria	CHEMTREC Vienna, Austria: 43-13649237
Belgium	CHEMTREC Brussels, Belgium: 32-28083237
Denmark	CHEMTREC Denmark: 45-69918573
Finland	CHEMTREC Finland: 358-942419014
France	CHEMTREC France: 33-975181407
Germany	CHEMTREC Germany: 0800-181-7059
Ireland	CHEMTREC Ireland: 353-19014670
Italy	CHEMTREC Italy: 800-789-767
Netherlands	CHEMTREC Netherlands: 31-858880596
Norway	CHEMTREC Norway: 47-21930678
Portugal	CHEMTREC Portugal: 351-308801773
Spain	CHEMTREC Spain: 900-868538
Sweden	CHEMTREC Sweden: 46-852503403
Switzerland	CHEMTREC Switzerland: 41-435082011
United Kingdom	CHEMTREC United Kingdom: 44-870-8200418

2. Hazard(s) identification

2.1. Classification of the substance or mixture*Regulation (EC) No 1272/2008*

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

2.2. Label elements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

Hazard statements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

2.3. Other hazards

No information available

3. Composition/information on ingredients**3.1 Substances**

Not applicable

3.2 Mixtures

Chemical name	EC No.	CAS No.	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
Water	231-791-2	7732-18-5	95	No data available	No data available
Sodium thiosulfate pentahydrate	-	10102-17-7	5	No data available	No data available

Full text of H- and EUH-phrases: see section 16**4. First-aid measures****4.1. Description of first aid measures**

Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Clean mouth with water and drink afterwards plenty of water.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms	No information available.
----------	---------------------------

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
--------------------	------------------------

5. Fire-fighting measures**5.1. Extinguishing media**

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
------------------------------	---

Unsuitable extinguishing media No information available.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical No information available.

5.3. Advice for firefighters

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

7. Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Ensure adequate ventilation.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Material Safety Data Sheet.

8. Exposure controls/personal protection

8.1. Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational

exposure limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Personal protective equipment

Eye/face protection No special protective equipment required.

Skin and body protection No special protective equipment required.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls No information available.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	colorless
Color	No information available
Odor	No information available.
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	5.6-6.6	None known
Melting point / freezing point	No data available	None known
Boiling point / boiling range	No data available	
Flash point	No data available	
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	Soluble in water	
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive properties	No information available	
Oxidizing properties	No information available	

9.2. Other information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk density	No information available

10. Stability and reactivity**10.1. Reactivity**

Reactivity	No information available.
------------	---------------------------

10.2. Chemical stability

Stability	Stable under normal conditions.
-----------	---------------------------------

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	None under normal processing.
------------------------------------	-------------------------------

10.4. Conditions to avoid

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

10.5. Incompatible materials

Incompatible materials	None known based on information supplied.
------------------------	---

10.6. Hazardous decomposition products

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

11. Toxicological information**11.1. Information on toxicological effects****Information on likely routes of exposure****Product Information**

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	No information available.
----------	---------------------------

Numerical measures of toxicity

Acute toxicity

Unknown acute toxicity 5 % of the mixture consists of ingredient(s) of unknown toxicity.

5 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.

5 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.

5 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).

5 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).

5 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg (Rat)		

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

12. Ecological information**12.1. Toxicity**

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

Unknown aquatic toxicity Contains 0 % of components with unknown hazards to the aquatic environment.

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation No information available.

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment No information available.

12.6. Other adverse effects

Other adverse effects No information available.

13. Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. Transport information

IMDG

14.1 UN number Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Marine pollutant Not applicable
14.6 Special Provisions None
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code No information available

ADR

14.1 UN number Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazards Not applicable
14.6 Special Provisions None

IATA

Not regulated
14.1 UN number Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazards Not applicable
14.6 Special Provisions None

15. Regulatory information

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

Chemical name	Germany - Water Classification (VwVwS)	Germany - TA-Luft Class
Sodium thiosulfate pentahydrate	WGK 1	

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Authorizations and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009 Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECL	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AICS	Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

Chemical Safety Report No information available

16. Other information**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend**

SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

Issuing Date 10-Nov-2014

Revision date 23-Apr-2020

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

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 Safety Data Sheet



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Issuing Date 18-Mar-2014

Revision date 23-Apr-2020

Revision Number 2

1. Identification

1.1. Product identifier

Catalogue Number 88007
Product Name Alcoholic Hematoxylin
Pure substance/mixture Mixture

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use In vitro diagnostics
Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Manufacturer
Richard-Allan Scientific
4481 Campus Drive
Kalamazoo, MI 49008
1-800-522-7270

For further information, please contact

1.4. Emergency telephone number

Emergency Telephone No information available

Emergency Telephone - §45 - (EC)1272/2008

Europe	112
Austria	CHEMTREC Vienna, Austria: 43-13649237
Belgium	CHEMTREC Brussels, Belgium: 32-28083237
Denmark	CHEMTREC Denmark: 45-69918573
Finland	CHEMTREC Finland: 358-942419014
France	CHEMTREC France: 33-975181407
Germany	CHEMTREC Germany: 0800-181-7059
Ireland	CHEMTREC Ireland: 353-19014670
Italy	CHEMTREC Italy: 800-789-767
Netherlands	CHEMTREC Netherlands: 31-858880596
Norway	CHEMTREC Norway: 47-21930678
Portugal	CHEMTREC Portugal: 351-308801773
Spain	CHEMTREC Spain: 900-868538
Sweden	CHEMTREC Sweden: 46-852503403
Switzerland	CHEMTREC Switzerland: 41-435082011
United Kingdom	CHEMTREC United Kingdom: 44-870-8200418

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Acute toxicity - Oral	Category 4 - (H302)
Acute toxicity - Dermal	Category 3 - (H311)
Specific target organ toxicity (single exposure)	Category 2 - (H371)
Flammable liquids	Category 2 - (H225)

2.2. Label elements**Signal word**

Danger

Hazard statements

H302 - Harmful if swallowed

H311 - Toxic in contact with skin

H371 - May cause damage to organs

H225 - Highly flammable liquid and vapor

EUH210 - Safety data sheet available on request

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

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

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

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

P321 - Specific treatment (see supplemental first aid instructions on this label)

P370 + P378 - In case of fire: Use dry chemical, CO₂, water spray or alcohol-resistant foam to extinguish

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

P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

Additional information

This product requires tactile warnings if supplied to the general public. This product requires child resistant fastenings if supplied to the general public. Placed on the market in aerosol containers or in containers fitted with a sealed spray attachment.

2.3. Other hazards

No information available

3. Composition/information on ingredients**3.1 Substances**

Not applicable

3.2 Mixtures

Chemical name	EC No.	CAS No.	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
Ethyl alcohol	200-578-6	64-17-5	83-88	Flam. Liq. 2 (H225)	No data available
Hematoxylin	208-237-3	517-28-2	5-6	No data available	No data available
Isopropyl alcohol	200-661-7	67-63-0	5-6	Eye Irrit. 2 (H319) STOT SE 3 (H336) Flam. Liq. 2 (H225)	No data available
Methyl alcohol	200-659-6	67-56-1	4-5	Acute Tox. 3 (H301) Acute Tox. 3 (H311)	No data available

				Acute Tox. 3 (H331) STOT SE 1 (H370) Flam. Liq. 2 (H225)	
--	--	--	--	--	--

Full text of H- and EUH-phrases: see section 16

4. First-aid measures

4.1. Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Inhalation	Remove to fresh air. IF exposed or concerned: Get medical advice/attention.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical advice/attention.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention.
Ingestion	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.
Self-protection of the first aider	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms	No information available.
-----------------	---------------------------

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
---------------------------	------------------------

5. Fire-fighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Dry chemical. Carbon dioxide (CO ₂). Water spray. Alcohol resistant foam.
Unsuitable extinguishing media	CAUTION: Use of water spray when fighting fire may be inefficient.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
---	---

5.3. Advice for firefighters

Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
---	--

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.
Other information	Ventilate the area. Refer to protective measures listed in Sections 7 and 8.
For emergency responders	Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions	Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.
----------------------------------	--

6.3. Methods and material for containment and cleaning up

Methods for containment	Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.
Methods for cleaning up	Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections	See section 8 for more information. See section 13 for more information.
------------------------------------	--

7. Handling and storage

7.1. Precautions for safe handling

Advice on safe handling	Use personal protection equipment. Avoid breathing vapors or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Take off contaminated clothing and wash before reuse.
General hygiene considerations	Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Keep out of the reach of children.
---------------------------	--

Store locked up.

7.3. Specific end use(s)**Risk Management Methods (RMM)** The information required is contained in this Material Safety Data Sheet.**8. Exposure controls/personal protection****8.1. Control parameters****Exposure Limits**

Chemical name	European Union	United Kingdom	France	Spain	Germany
Ethyl alcohol 64-17-5	-	TWA: 1000 ppm TWA: 1920 mg/m ³ STEL: 3000 ppm STEL: 5760 mg/m ³	TWA: 1000 ppm TWA: 1900 mg/m ³ STEL: 5000 ppm STEL: 9500 mg/m ³	STEL: 1000 ppm STEL: 1910 mg/m ³	TWA: 200 ppm TWA: 380 mg/m ³
Isopropyl alcohol 67-63-0	-	TWA: 400 ppm TWA: 999 mg/m ³ STEL: 500 ppm STEL: 1250 mg/m ³	STEL: 400 ppm STEL: 980 mg/m ³	TWA: 200 ppm TWA: 500 mg/m ³ STEL: 400 ppm STEL: 1000 mg/m ³	TWA: 200 ppm TWA: 500 mg/m ³
Methyl alcohol 67-56-1	TWA: 200 ppm TWA: 260 mg/m ³ *	TWA: 200 ppm TWA: 266 mg/m ³ STEL: 250 ppm STEL: 333 mg/m ³ Sk*	TWA: 200 ppm TWA: 260 mg/m ³ STEL: 1000 ppm STEL: 1300 mg/m ³	TWA: 200 ppm TWA: 266 mg/m ³ via dérmica*	TWA: 200 ppm TWA: 270 mg/m ³
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Ethyl alcohol 64-17-5	-	TWA: 1000 ppm	TWA: 260 mg/m ³ STEL: 1900 mg/m ³ H*	TWA: 1000 ppm TWA: 1900 mg/m ³ STEL: 1300 ppm STEL: 2500 mg/m ³	TWA: 1000 ppm TWA: 1900 mg/m ³
Isopropyl alcohol 67-63-0	-	TWA: 200 ppm STEL: 400 ppm	-	TWA: 200 ppm TWA: 500 mg/m ³ STEL: 250 ppm STEL: 620 mg/m ³	TWA: 200 ppm TWA: 490 mg/m ³
Methyl alcohol 67-56-1	TWA: 200 ppm TWA: 260 mg/m ³ pelle*	TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm	TWA: 133 mg/m ³ H*	TWA: 200 ppm TWA: 270 mg/m ³ STEL: 250 ppm STEL: 330 mg/m ³ iho*	TWA: 200 ppm TWA: 260 mg/m ³ H*
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
Ethyl alcohol 64-17-5	TWA: 1000 ppm TWA: 1900 mg/m ³ STEL 2000 ppm STEL 3800 mg/m ³	TWA: 500 ppm TWA: 960 mg/m ³ STEL: 1000 ppm STEL: 1920 mg/m ³	TWA: 1900 mg/m ³	STEL: 625 ppm STEL: 1187.5 mg/m ³	STEL: 1000 ppm
Isopropyl alcohol 67-63-0	TWA: 200 ppm TWA: 500 mg/m ³ STEL 800 ppm STEL 2000 mg/m ³	TWA: 200 ppm TWA: 500 mg/m ³ STEL: 400 ppm STEL: 1000 mg/m ³	STEL: 1200 mg/m ³ TWA: 900 mg/m ³	STEL: 125 ppm STEL: 306.25 mg/m ³	TWA: 200 ppm STEL: 400 ppm Sk*
Methyl alcohol 67-56-1	TWA: 200 ppm TWA: 260 mg/m ³ STEL 800 ppm STEL 1040 mg/m ³ H*	TWA: 200 ppm TWA: 260 mg/m ³ STEL: 800 ppm STEL: 1040 mg/m ³ H*	STEL: 300 mg/m ³ TWA: 100 mg/m ³	STEL: 125 ppm STEL: 162.5 mg/m ³	TWA: 200 ppm TWA: 260 mg/m ³ STEL: 600 ppm STEL: 780 mg/m ³ Sk*

Derived No Effect Level (DNEL) No information available.**Predicted No Effect Concentration** No information available.

(PNEC)

8.2. Exposure controls**Personal protective equipment**

Eye/face protection	Tight sealing safety goggles.
Hand protection	Wear suitable gloves. Impervious gloves.
Skin and body protection	Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Remove and wash contaminated clothing and gloves, including the inside, before re-use.
Environmental exposure controls	No information available.

9. Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state	Liquid	
Appearance	purple	
Color	No information available	
Odor	Characteristic. Alcohol-like.	
Odor threshold	No information available	
Property	Values	Remarks • Method
pH	3.0-6.5 (25% aqueous solution)	None known
Melting point / freezing point	No data available	None known
Boiling point / boiling range	78.5 °C	
Flash point	13.89 °C	
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	1.2 cP	
Explosive properties	No information available	
Oxidizing properties	No information available	

9.2. Other information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk density	No information available

10. Stability and reactivity**10.1. Reactivity**

Reactivity	No information available.
------------	---------------------------

10.2. Chemical stability

Stability	Stable under normal conditions.
-----------	---------------------------------

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Yes.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	None under normal processing.
------------------------------------	-------------------------------

10.4. Conditions to avoid

Conditions to avoid	Heat, flames and sparks.
---------------------	--------------------------

10.5. Incompatible materials

Incompatible materials	None known based on information supplied.
------------------------	---

10.6. Hazardous decomposition products

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

11. Toxicological information**11.1. Information on toxicological effects****Information on likely routes of exposure****Product Information**

Inhalation	May be harmful if inhaled.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available. Toxic in contact with skin. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	No information available.
----------	---------------------------

Numerical measures of toxicity**Acute toxicity**

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	1,528.50 mg/kg
ATEmix (dermal)	558.70 mg/kg
ATEmix (inhalation-dust/mist)	9.28 mg/l

Unknown acute toxicity 100 % of the mixture consists of ingredient(s) of unknown toxicity.

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.

90 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.

100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).

100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Ethyl alcohol	= 7060 mg/kg (Rat)		= 124.7 mg/L (Rat) 4 h
Isopropyl alcohol	= 1870 mg/kg (Rat)	= 4059 mg/kg (Rabbit)	= 72600 mg/m ³ (Rat) 4 h
Methyl alcohol	= 6200 mg/kg (Rat)	= 15840 mg/kg (Rabbit) = 15800 mg/kg (Rabbit)	= 64000 ppm (Rat) 4 h = 22500 ppm (Rat) 8 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure Based on the classification criteria of the Globally Harmonized System as adopted in the country or region with which this safety data sheet complies, this product has been determined to cause systemic target organ toxicity from acute exposure. (STOT SE). May cause damage to organs if swallowed. May cause damage to organs in contact with skin.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

12. Ecological information**12.1. Toxicity****Ecotoxicity**

Unknown aquatic toxicity Contains 0 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
---------------	----------------------	------	----------------------------	-----------

Ethyl alcohol	-	LC50: 12.0 - 16.0mg/L (96h, Oncorhynchus mykiss) LC50: >100mg/L (96h, Pimephales promelas) LC50: 13400 - 15100mg/L (96h, Pimephales promelas)	-	EC50: =2mg/L (48h, Daphnia magna) LC50: 9268 - 14221mg/L (48h, Daphnia magna) EC50: =10800mg/L (24h, Daphnia magna)
Isopropyl alcohol	EC50: >1000mg/L (96h, Desmodesmus subspicatus) EC50: >1000mg/L (72h, Desmodesmus subspicatus)	LC50: =11130mg/L (96h, Pimephales promelas) LC50: =9640mg/L (96h, Pimephales promelas) LC50: >1400000µg/L (96h, Lepomis macrochirus)	-	EC50: =13299mg/L (48h, Daphnia magna)
Methyl alcohol	-	LC50: 19500 - 20700mg/L (96h, Oncorhynchus mykiss) LC50: 13500 - 17600mg/L (96h, Lepomis macrochirus) LC50: 18 - 20mg/L (96h, Oncorhynchus mykiss) LC50: =28200mg/L (96h, Pimephales promelas) LC50: >100mg/L (96h, Pimephales promelas)	-	-

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient
Ethyl alcohol	-0.32
Isopropyl alcohol	0.05
Methyl alcohol	-0.77

12.4. Mobility in soil

Mobility in soil No information available.

Mobility .

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment No information available.

12.6. Other adverse effects

Other adverse effects No information available.

13. Disposal considerations**13.1. Waste treatment methods**

Waste from residues/unused products	Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

14. Transport information

IMDG

14.1 UN number	UN1170
14.2 UN proper shipping name	ETHANOL SOLUTION
14.3 Transport hazard class(es)	3
14.4 Packing group	II
14.5 Marine pollutant	Not applicable
14.6 Special Provisions	None
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code	No information available

ADR

14.1 UN number	UN1170
14.2 UN proper shipping name	ETHANOL SOLUTION
14.3 Transport hazard class(es)	3
14.4 Packing group	II
14.5 Environmental hazards	Not applicable
14.6 Special Provisions	None

IATA

14.1 UN number	UN1170
14.2 UN proper shipping name	ETHANOL SOLUTION
14.3 Transport hazard class(es)	3
14.4 Packing group	II
14.5 Environmental hazards	Not applicable
14.6 Special Provisions	None

15. Regulatory information

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

Chemical name	Germany - Water Classification (VwVwS)	Germany - TA-Luft Class
Ethyl alcohol	WGK 1	
Isopropyl alcohol	WGK 1	
Methyl alcohol	WGK 2	

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Authorizations and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This

product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not applicable

Dangerous substance category per Seveso Directive (2012/18/EU)

P5a - FLAMMABLE LIQUIDS

P5b - FLAMMABLE LIQUIDS

P5c - FLAMMABLE LIQUIDS

Ozone-depleting substances (ODS) regulation (EC) 1005/2009 Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECL	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AICS	Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

Chemical Safety Report No information available

16. Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

H225 - Highly flammable liquid and vapor

H301 - Toxic if swallowed

H311 - Toxic in contact with skin

H319 - Causes serious eye irritation

H331 - Toxic if inhaled

H336 - May cause drowsiness or dizziness

H370 - Causes damage to organs

Legend

SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

Issuing Date 18-Mar-2014

Revision date 23-Apr-2020

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

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 Safety Data Sheet



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Issuing Date 30-Nov-2014

Revision date 23-Apr-2020

Revision Number 2

1. Identification

1.1. Product identifier

Catalogue Number 88008
Product Name Ferric Chloride
Pure substance/mixture Substance

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use In vitro diagnostics
Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Manufacturer
Richard-Allan Scientific
4481 Campus Drive
Kalamazoo, MI 49008
1-800-522-7270

For further information, please contact

1.4. Emergency telephone number

Emergency Telephone No information available

Emergency Telephone - §45 - (EC)1272/2008

Europe	112
Austria	CHEMTREC Vienna, Austria: 43-13649237
Belgium	CHEMTREC Brussels, Belgium: 32-28083237
Denmark	CHEMTREC Denmark: 45-69918573
Finland	CHEMTREC Finland: 358-942419014
France	CHEMTREC France: 33-975181407
Germany	CHEMTREC Germany: 0800-181-7059
Ireland	CHEMTREC Ireland: 353-19014670
Italy	CHEMTREC Italy: 800-789-767
Netherlands	CHEMTREC Netherlands: 31-858880596
Norway	CHEMTREC Norway: 47-21930678
Portugal	CHEMTREC Portugal: 351-308801773
Spain	CHEMTREC Spain: 900-868538
Sweden	CHEMTREC Sweden: 46-852503403
Switzerland	CHEMTREC Switzerland: 41-435082011
United Kingdom	CHEMTREC United Kingdom: 44-870-8200418

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Corrosive to metals

Category 1 - (H290)

2.2. Label elements**Signal word**

Warning

Hazard statements

H290 - May be corrosive to metals

EUH210 - Safety data sheet available on request

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

P234 - Keep only in original packaging

P390 - Absorb spillage to prevent material damage

P201 - Obtain special instructions before use

P234 - Keep only in original container

P406 - Store in corrosive resistant stainless steel container with a resistant inner liner

2.3. Other hazards

No information available

3. Composition/information on ingredients**3.1 Substances**

Not applicable

3.2 Mixtures

Chemical name	EC No.	CAS No.	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
Water	231-791-2	7732-18-5	>90	No data available	No data available
Iron(III) chloride	231-729-4	7705-08-0	9-10	No data available	No data available

Full text of H- and EUH-phrases: see section 16**4. First-aid measures****4.1. Description of first aid measures****General advice**

Show this safety data sheet to the doctor in attendance.

Inhalation

Remove to fresh air. Get medical attention immediately if symptoms occur.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and

persists.

Skin contact	Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

4.2. Most important symptoms and effects, both acute and delayed

Symptoms	No information available.
-----------------	---------------------------

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
---------------------------	------------------------

5. Fire-fighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	No information available.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	No information available.
---	---------------------------

5.3. Advice for firefighters

Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
---	--

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required.
Other information	Refer to protective measures listed in Sections 7 and 8.
For emergency responders	Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions	Prevent further leakage or spillage if safe to do so.
----------------------------------	---

6.3. Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Take up mechanically, placing in appropriate containers for disposal.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

7. Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing.

General hygiene considerations Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Material Safety Data Sheet.

8. Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	European Union	United Kingdom	France	Spain	Germany
Iron(III) chloride 7705-08-0	-	TWA: 1 mg/m ³	-	TWA: 1 mg/m ³	-
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Iron(III) chloride 7705-08-0	-	TWA: 1 mg/m ³	-	TWA: 1 mg/m ³	TWA: 1 mg/m ³
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
Iron(III) chloride 7705-08-0	-	TWA: 1 mg/m ³	-	STEL: 2 mg/m ³	TWA: 1 mg/m ³ STEL: 2 mg/m ³

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Personal protective equipment

Eye/face protection No special protective equipment required.

Skin and body protection No special protective equipment required.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations	Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended.
Environmental exposure controls	No information available.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	dark brown
Color	No information available
Odor	No information available.
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	1.05-1.30	
Melting point / freezing point	No data available	None known
Boiling point / boiling range	No data available	
Flash point	No data available	
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive properties	No information available	
Oxidizing properties	No information available	

9.2. Other information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk density	No information available

10. Stability and reactivity

10.1. Reactivity

Reactivity	No information available.
-------------------	---------------------------

10.2. Chemical stability

Stability	Stable under normal conditions.
------------------	---------------------------------

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Exposure to air or moisture over prolonged periods.

10.5. Incompatible materials

Incompatible materials Oxidizing agent.

10.6. Hazardous decomposition products

Hazardous decomposition products Chlorine.

11. Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available.

Skin contact Specific test data for the substance or mixture is not available.

Ingestion Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Numerical measures of toxicity

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document

Unknown acute toxicity 1 % of the mixture consists of ingredient(s) of unknown toxicity.

1 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.

1 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.

1 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).

1 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).

1 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg (Rat)		
Iron(III) chloride	= 316 mg/kg (Rat) = 450 mg/kg (Rat)		

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	No information available.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.

12. Ecological information**12.1. Toxicity****Ecotoxicity**

.

Unknown aquatic toxicity

Contains 0 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Iron(III) chloride	-	LC50: =75.6mg/L (96h, <i>Gambusia affinis</i>) LC50: =20.26mg/L (96h, <i>Lepomis macrochirus</i>) LC50: 20.95 - 22.56mg/L (96h, <i>Pimephales promelas</i>)	-	EC50: =27.9mg/L (48h, <i>Daphnia magna</i>) EC50: =9.6mg/L (48h, <i>Daphnia magna</i>)

12.2. Persistence and degradability**Persistence and degradability** No information available.**12.3. Bioaccumulative potential****Bioaccumulation** There is no data for this product.**Component Information**

Chemical name	Partition coefficient
Iron(III) chloride	-4

12.4. Mobility in soil**Mobility in soil** No information available.**Mobility**

.

12.5. Results of PBT and vPvB assessment**PBT and vPvB assessment** No information available.

12.6. Other adverse effects

Other adverse effects No information available.

13. Disposal considerations**13.1. Waste treatment methods**

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. Transport information**IMDG**

14.1 UN number UN2582
 14.2 UN proper shipping name FERRIC CHLORIDE, SOLUTION
 14.3 Transport hazard class(es) 8
 14.4 Packing group III
 14.5 Marine pollutant Not applicable
 14.6 Special Provisions None
 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code No information available

ADR

14.1 UN number UN2582
 14.2 UN proper shipping name FERRIC CHLORIDE SOLUTION
 14.3 Transport hazard class(es) 8
 14.4 Packing group III
 14.5 Environmental hazards Not applicable
 14.6 Special Provisions None

IATA

14.1 UN number UN2582
 14.2 UN proper shipping name FERRIC CHLORIDE, SOLUTION
 14.3 Transport hazard class(es) 8
 14.4 Packing group III
 14.5 Environmental hazards Not applicable
 14.6 Special Provisions None

15. Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Chemical name	Germany - Water Classification (VwVwS)	Germany - TA-Luft Class
Iron(III) chloride	WGK 1	

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Authorizations and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009 Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDSL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECL	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AICS	Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

Chemical Safety Report No information available

16. Other information**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend**

SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

Issuing Date 30-Nov-2014

Revision date 23-Apr-2020

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

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 Safety Data Sheet



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Issuing Date 12-Nov-2014

Revision date 23-Apr-2020

Revision Number 2

1. Identification

1.1. Product identifier

Catalogue Number 88009
Product Name Wegert's Iodine Solution
Pure substance/mixture Substance

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use In vitro diagnostics
Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Manufacturer

Richard-Allan Scientific
4481 Campus Drive
Kalamazoo, MI 49008
1-800-522-7270

For further information, please contact

1.4. Emergency telephone number

Emergency Telephone No information available

Emergency Telephone - §45 - (EC)1272/2008

Europe	112
Austria	CHEMTREC Vienna, Austria: 43-13649237
Belgium	CHEMTREC Brussels, Belgium: 32-28083237
Denmark	CHEMTREC Denmark: 45-69918573
Finland	CHEMTREC Finland: 358-942419014
France	CHEMTREC France: 33-975181407
Germany	CHEMTREC Germany: 0800-181-7059
Ireland	CHEMTREC Ireland: 353-19014670
Italy	CHEMTREC Italy: 800-789-767
Netherlands	CHEMTREC Netherlands: 31-858880596
Norway	CHEMTREC Norway: 47-21930678
Portugal	CHEMTREC Portugal: 351-308801773
Spain	CHEMTREC Spain: 900-868538
Sweden	CHEMTREC Sweden: 46-852503403
Switzerland	CHEMTREC Switzerland: 41-435082011
United Kingdom	CHEMTREC United Kingdom: 44-870-8200418

2. Hazard(s) identification

2.1. Classification of the substance or mixture*Regulation (EC) No 1272/2008*

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

2.2. Label elements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

Hazard statements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

EUH210 - Safety data sheet available on request

2.3. Other hazards

No information available

3. Composition/information on ingredients**3.1 Substances**

Not applicable

3.2 Mixtures

Chemical name	EC No.	CAS No.	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
Water	231-791-2	7732-18-5	>97	No data available	No data available
Potassium iodide	231-659-4	7681-11-0	2	No data available	No data available
Iodine	231-442-4	7553-56-2	1.0	Acute Tox. 4 (H312) Acute Tox. 4 (H332) Aquatic Acute 1 (H400)	No data available

Full text of H- and EUH-phrases: see section 16**4. First-aid measures****4.1. Description of first aid measures**

Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Clean mouth with water and drink afterwards plenty of water.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms	No information available.
----------	---------------------------

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
--------------------	------------------------

5. Fire-fighting measures

5.1. Extinguishing media

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

Unsuitable extinguishing media No information available.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical No information available.

5.3. Advice for firefighters

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Personal precautions Ensure adequate ventilation.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

7. Handling and storage**7.1. Precautions for safe handling**

Advice on safe handling Ensure adequate ventilation.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Material Safety Data Sheet.

8. Exposure controls/personal protection

8.1. Control parameters**Exposure Limits**

Chemical name	European Union	United Kingdom	France	Spain	Germany
Iodine 7553-56-2	-	STEL: 0.1 ppm STEL: 1.1 mg/m ³	STEL: 0.1 ppm STEL: 1 mg/m ³	STEL: 0.1 ppm STEL: 1 mg/m ³	-
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Iodine 7553-56-2	-	STEL: 0.1 ppm	-	STEL: 0.1 ppm STEL: 1.1 mg/m ³ iho*	Ceiling: 0.1 ppm Ceiling: 1 mg/m ³
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
Potassium iodide 7681-11-0	-	-	-	-	TWA: 0.01 ppm TWA: 0.01 mg/m ³ STEL: 0.1 ppm
Iodine 7553-56-2	TWA: 0.1 ppm TWA: 1 mg/m ³ STEL 0.1 ppm STEL 1 mg/m ³ Ceiling 0.1 ppm Ceiling 1 mg/m ³ H*	TWA: 0.1 ppm TWA: 1 mg/m ³ STEL: 0.1 ppm STEL: 1 mg/m ³ H*	STEL: 1 mg/m ³ TWA: 0.5 mg/m ³	-	TWA: 0.01 ppm TWA: 0.01 mg/m ³ STEL: 0.1 ppm

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls**Personal protective equipment**

Eye/face protection No special protective equipment required.

Skin and body protection No special protective equipment required.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls No information available.

9. Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state Liquid
Appearance yellow Red clear
Color No information available
Odor Odorless.
Odor threshold No information available

Property	Values	Remarks • Method
pH	4.2-6.0	

Melting point / freezing point	No data available	None known
Boiling point / boiling range	100 °C	
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive properties	No information available	
Oxidizing properties	No information available	

9.2. Other information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk density	No information available

10. Stability and reactivity**10.1. Reactivity**

Reactivity	No information available.
------------	---------------------------

10.2. Chemical stability

Stability	Stable under normal conditions.
-----------	---------------------------------

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	None under normal processing.
------------------------------------	-------------------------------

10.4. Conditions to avoid

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

10.5. Incompatible materials

Incompatible materials	None known based on information supplied.
------------------------	---

10.6. Hazardous decomposition products

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

11. Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	No information available.
----------	---------------------------

Numerical measures of toxicity

Acute toxicity

Unknown acute toxicity	0 % of the mixture consists of ingredient(s) of unknown toxicity.
	0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
	0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
	0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).
	0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).
	0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg (Rat)		
Iodine	= 14 g/kg (Rat)		

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	No information available.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.

12. Ecological information

12.1. Toxicity

Ecotoxicity

.

Unknown aquatic toxicity

Contains 0 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Potassium iodide	-	LC50: >100mg/L (96h, Danio rerio)	-	-
Iodine	-	LC50: =1.67mg/L (96h, Oncorhynchus mykiss)	-	-

12.2. Persistence and degradability

Persistence and degradability

No information available.

12.3. Bioaccumulative potential

Bioaccumulation

There is no data for this product.

12.4. Mobility in soil

Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment

No information available.

12.6. Other adverse effects

Other adverse effects

No information available.

13. Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging

Do not reuse empty containers.

14. Transport information

IMDG

14.1 UN number

Not regulated

14.2 UN proper shipping name

Not regulated

14.3 Transport hazard class(es)

Not regulated

14.4 Packing group

Not regulated

14.5 Marine pollutant

Not applicable

14.6 Special Provisions

None

14.7. Transport in bulk according to

No information available

Annex II of MARPOL and the IBC Code**ADR**

14.1 UN number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special Provisions	None

IATA**Not regulated**

14.1 UN number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special Provisions	None

15. Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Chemical name	Germany - Water Classification (VwVwS)	Germany - TA-Luft Class
Potassium iodide	WGK 3	
Iodine	WGK 2	

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Authorizations and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009 Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECL	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AICS	Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

Chemical Safety Report No information available

16. Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

H312 - Harmful in contact with skin
H332 - Harmful if inhaled
H400 - Very toxic to aquatic life

Legend

SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

Issuing Date 12-Nov-2014

Revision date 23-Apr-2020

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

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 Safety Data Sheet



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Issuing Date 12-Nov-2014

Revision date 23-Apr-2020

Revision Number 2

1. Identification

1.1. Product identifier

Catalogue Number 88011
Product Name Chromaview Van Geison
Pure substance/mixture Substance

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use In vitro diagnostics
Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Manufacturer
Richard-Allan Scientific
4481 Campus Drive
Kalamazoo, MI 49008
1-800-522-7270

For further information, please contact

1.4. Emergency telephone number

Emergency Telephone No information available

Emergency Telephone - §45 - (EC)1272/2008

Europe	112
Austria	CHEMTREC Vienna, Austria: 43-13649237
Belgium	CHEMTREC Brussels, Belgium: 32-28083237
Denmark	CHEMTREC Denmark: 45-69918573
Finland	CHEMTREC Finland: 358-942419014
France	CHEMTREC France: 33-975181407
Germany	CHEMTREC Germany: 0800-181-7059
Ireland	CHEMTREC Ireland: 353-19014670
Italy	CHEMTREC Italy: 800-789-767
Netherlands	CHEMTREC Netherlands: 31-858880596
Norway	CHEMTREC Norway: 47-21930678
Portugal	CHEMTREC Portugal: 351-308801773
Spain	CHEMTREC Spain: 900-868538
Sweden	CHEMTREC Sweden: 46-852503403
Switzerland	CHEMTREC Switzerland: 41-435082011
United Kingdom	CHEMTREC United Kingdom: 44-870-8200418

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Skin corrosion/irritation	Category 1 - (H314)
Serious eye damage/eye irritation	Category 1 - (H318)
Corrosive to metals	Category 1 - (H290)

2.2. Label elements**Signal word**

Danger

Hazard statements

H314 - Causes severe skin burns and eye damage

H290 - May be corrosive to metals

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

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

P280 - Wear protective gloves/protective clothing and eye/face protection

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

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

P310 - Immediately call a POISON CENTER or doctor

P321 - Specific treatment (see .? on this label)

P201 - Obtain special instructions before use

P234 - Keep only in original container

P406 - Store in corrosive resistant stainless steel container with a resistant inner liner

Additional information

This product requires tactile warnings if supplied to the general public. This product requires child resistant fastenings if supplied to the general public.

2.3. Other hazards

No information available

3. Composition/information on ingredients**3.1 Substances**

Not applicable

3.2 Mixtures

Chemical name	EC No.	CAS No.	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
Water	231-791-2	7732-18-5	> 97	No data available	No data available
Picric acid	201-865-9	88-89-1	2.0	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Expl. 1.1 (H201)	No data available
Diazolidinyl urea	278-928-2	78491-02-8	<1	No data available	No data available
Acid fuchsine	221-816-5	3244-88-0	<0.10	No data available	No data available

Full text of H- and EUH-phrases: see section 16

4. First-aid measures

4.1. Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Inhalation	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical advice/attention.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get immediate medical advice/attention.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8). Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms	Burning sensation.
-----------------	--------------------

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.
---------------------------	--

5. Fire-fighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	No information available.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors.
---	--

5.3. Advice for firefighters

Special protective equipment for	Firefighters should wear self-contained breathing apparatus and full firefighting turnout
---	---

fire-fighters gear. Use personal protection equipment.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Attention! Corrosive material. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Other information Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

7. Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

General hygiene considerations Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Material Safety Data Sheet.

8. Exposure controls/personal protection

8.1. Control parameters**Exposure Limits**

Chemical name	European Union	United Kingdom	France	Spain	Germany
Picric acid 88-89-1	TWA: 0.1 mg/m ³	TWA: 0.1 mg/m ³ STEL: 0.3 mg/m ³	TWA: 0.1 mg/m ³	TWA: 0.1 mg/m ³	TWA: 0.1 mg/m ³
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Picric acid 88-89-1	-	TWA: 0.1 mg/m ³	TWA: 0.1 mg/m ³	TWA: 0.1 mg/m ³ STEL: 0.3 mg/m ³ iHo*	TWA: 0.1 mg/m ³ H*
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
Picric acid 88-89-1	TWA: 0.1 mg/m ³ STEL 0.2 mg/m ³ H*	TWA: 0.1 mg/m ³ STEL: 0.1 mg/m ³ H*	TWA: 0.1 mg/m ³	STEL: 0.3 mg/m ³	TWA: 0.1 mg/m ³ STEL: 0.3 mg/m ³ Sk*

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls**Personal protective equipment**

Eye/face protection Face protection shield.

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product.

Environmental exposure controls No information available.

9. Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state Liquid
Appearance amber
Color No information available
Odor Odorless.
Odor threshold No information available

Property	Values	Remarks • Method
pH	1.40-1.85	
Melting point / freezing point	No data available	None known

Boiling point / boiling range	No data available	
Flash point	No data available	
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	1.00 - 1.08	
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	1.54 cP @ 21°C	
Explosive properties	No information available	
Oxidizing properties	No information available	

9.2. Other information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk density	No information available

10. Stability and reactivity**10.1. Reactivity**

Reactivity	No information available.
------------	---------------------------

10.2. Chemical stability

Stability	Stable under normal conditions.
-----------	---------------------------------

Explosion data

Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	None under normal processing.
Hazardous polymerization	Hazardous polymerization does not occur.

10.4. Conditions to avoid

Conditions to avoid	Exposure to air or moisture over prolonged periods.
---------------------	---

10.5. Incompatible materials

Incompatible materials	Oxidizing agent. Acids. Bases.
------------------------	--------------------------------

10.6. Hazardous decomposition products

Hazardous decomposition products	Carbon monoxide (CO). Carbon dioxide (CO ₂). Thermal decomposition can lead to release of irritating gases and vapors.
----------------------------------	--

11. Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available. Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal.
Eye contact	Specific test data for the substance or mixture is not available. Causes burns. (based on components). Corrosive to the eyes and may cause severe damage including blindness. Causes serious eye damage. May cause irreversible damage to eyes.
Skin contact	Specific test data for the substance or mixture is not available. May cause irritation.
Ingestion	Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Redness. Burning. May cause blindness. Coughing and/ or wheezing.
-----------------	---

Numerical measures of toxicity

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (inhalation-dust/mist) 250.50 mg/l

Unknown acute toxicity 0 % of the mixture consists of ingredient(s) of unknown toxicity.

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.

0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg (Rat)		
Picric acid	= 200 mg/kg (Rat)		
Diazolidinyl urea	= 2600 mg/kg (Rat)	> 2 g/kg (Rabbit)	

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	May cause skin irritation.
----------------------------------	----------------------------

Serious eye damage/eye irritation	Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Other adverse effects	The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.
Aspiration hazard	No information available.

12. Ecological information

12.1. Toxicity

Ecotoxicity	The environmental impact of this product has not been fully investigated.
Unknown aquatic toxicity	Contains 0 % of components with unknown hazards to the aquatic environment.

12.2. Persistence and degradability

Persistence and degradability	No information available.
--------------------------------------	---------------------------

12.3. Bioaccumulative potential

Bioaccumulation	There is no data for this product.
------------------------	------------------------------------

12.4. Mobility in soil

Mobility in soil	No information available.
-------------------------	---------------------------

Mobility

.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment	No information available.
--------------------------------	---------------------------

12.6. Other adverse effects

Other adverse effects	No information available.
------------------------------	---------------------------

13. Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.

14. Transport information

IMDG

14.1 UN number	UN3265
14.2 UN proper shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
14.3 Transport hazard class(es)	8
14.4 Packing group	III
14.5 Marine pollutant	Not applicable
14.6 Special Provisions	None
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code	No information available

ADR

14.1 UN number	UN3265
14.2 UN proper shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
14.3 Transport hazard class(es)	8
14.4 Packing group	III
14.5 Environmental hazards	Not applicable
14.6 Special Provisions	None

IATA

14.1 UN number	UN3265
14.2 UN proper shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
14.3 Transport hazard class(es)	8
14.4 Packing group	III
14.5 Environmental hazards	Not applicable
14.6 Special Provisions	None

15. Regulatory information

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

Chemical name	Germany - Water Classification (VwVwS)	Germany - TA-Luft Class
Picric acid	WGK 2	

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Authorizations and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009 Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDSL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECL	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AICS	Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

Chemical Safety Report No information available

16. Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

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

Legend

SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AELG(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

Issuing Date 12-Nov-2014

Revision date 23-Apr-2020

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

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 Safety Data Sheet