SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended 2015/830.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name: Hematoxylin (Papanicolaou 1)

Product No. 3873

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

Identified uses: For Laboratory, Research or Manufacturing Use.
Uses advised against: Not determined.

1.3 Details of the supplier of the safety data sheet

Avantor Performance Materials Poland S.A.
Sowinskiego 11str., 44-101 Gliwice,
Poland

Telephone: 48 32 239-20-00
Fax: 48 32 239-23-70

Contact person: Environmental Health & Safety
E-mail: export@avantormaterials.com

E-mail address of person responsible for this SDS: SDS@avantormaterials.com

1.4 Emergency telephone number: CHEMTREC: (44)-870-8200418

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

The product has been classified according to the legislation in force.

Classification according to Regulation (EC) No 1272/2008 as amended.

Health Hazards

Serious eye damage	Category 1	H318: Causes serious eye damage.
Specific Target Organ Toxicity - Repeated Exposure	Category 2	H373: May cause damage to organs through prolonged or repeated exposure.

2.2 Label Elements

Contains: Ethylene glycol
ALUMINIUM SULFATE, n-HYDRATE
ACETIC ACID

Signal Word: Danger

Hazard Statement(s): H318: Causes serious eye damage.
H373: May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements

Prevention: P260: Do not breathe dust/fume/gas/mist/vapours/spray.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response: P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a POISON CENTER or doctor/physician.

Disposal: P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

2.3 Other hazards No data available.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical name	Concentration	CAS-No.	EC No.	REACH Registration No.	M-Factor:	Notes
Ethylene glycol	20 - <50%	107-21-1	203-473-3	01-2119456816-28-XXXX	No data available.	#
ALUMINIUM SULFATE, n-HYDRATE	1 - <3%	17927-65-0	233-135-0	No data available.	No data available.	#
ACETIC ACID	1 - <3%	64-19-7	200-580-7	01-2119475328-30-XXXX	No data available.	#

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
# This substance has workplace exposure limit(s).

Classification

Chemical name	Classification	Notes
Ethylene glycol	Acute Tox. 4 H302, STOT RE 2 H373	No data available.
ALUMINIUM SULFATE, n-HYDRATE	Eye Dam. 1 H318	No data available.
ACETIC ACID	Flam. Liq. 3 H226, Skin Corr. 1A H314	Note B

The full text for all H-statements is displayed in section 16.

CLP: Regulation No. 1272/2008.

SECTION 4: First Aid Measures

General: Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

4.1 Description of first aid measures

Inhalation: Move to fresh air.

Skin Contact: Wash skin thoroughly with soap and water. If skin irritation occurs: Get medical advice/attention.

Eye contact: If eye irritation persists: Get medical advice/attention. Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses.

Ingestion: Rinse mouth. Get medical attention if symptoms occur. Never give liquid to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed: May cause irritation to skin, eyes, and respiratory tract.

4.3 Indication of any immediate medical attention and special treatment needed

Hazards: No information about adverse effects due to exposure.

Treatment: Treat symptomatically. Symptoms may be delayed.

SECTION 5: Firefighting Measures

General Fire Hazards: No unusual fire or explosion hazards noted.

5.1 Extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: No data available.

5.2 Special hazards arising from the substance or mixture: None known.

5.3 Advice for firefighters

Special fire fighting procedures: In case of fire and/or explosion do not breathe fumes.

Special protective equipment for firefighters: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures: Keep unauthorised personnel away.

6.2 Environmental Precautions: Do not contaminate water sources or sewer. Avoid release to the environment.

6.3 Methods and material for containment and cleaning up: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Dyke far ahead of larger spill for later recovery and disposal.

6.4 Reference to other sections: No data available.

SECTION 7: Handling and Storage:

7.1 Precautions for safe handling: Use personal protective equipment as required. Wear protective gloves/protective clothing/eye protection/face protection. Remove contaminated clothing and wash the skin thoroughly with soap and water after work. See Section 8 of the SDS for Personal Protective Equipment. Do not eat, drink or smoke when using the product. Wash at the end of each work shift and before eating, smoking or using the toilet.

7.2 Conditions for safe storage, including any incompatibilities: No special storage precautions noted. Keep container tightly closed.

7.3 Specific end use(s): No data available.

SECTION 8: Exposure Controls/Personal Protection

8.1 Control Parameters

Occupational Exposure Limits

Chemical name	Type	Exposure Limit Values		Source
Ethylene glycol - Vapor.	TWA	20 ppm	52 mg/m3	UK. EH40 Workplace Exposure Limits (WELs) (2007)
	STEL	40 ppm	104 mg/m3	UK. EH40 Workplace Exposure Limits (WELs) (2007)
Ethylene glycol - Particulate.	TWA		10 mg/m3	UK. EH40 Workplace Exposure Limits (WELs) (2007)
Ethylene glycol	TWA	20 ppm	52 mg/m3	EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU (12 2009)
	STEL	40 ppm	104 mg/m3	EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU (12 2009)
ALUMINIUM SULFATE, n-HYDRATE	TWA		2 mg/m3	UK. EH40 Workplace Exposure Limits (WELs) (2007)
ACETIC ACID	TWA	10 ppm	25 mg/m3	EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU (12 2009)

8.2 Exposure controls

Appropriate Engineering Controls: No special requirements under ordinary conditions of use and with adequate ventilation.

Individual protection measures, such as personal protective equipment

General information: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory and eye protection may be needed in special circumstances, such as poorly ventilated spaces, heating, evaporation of liquids from large surfaces, spraying of mists, mechanical generation of dusts, drying of solids, etc.

Eye/face protection: Use personal protective equipment as required.

Skin protection

Hand Protection: Material: Chemical resistant gloves

Other:	Wear suitable protective clothing.
Respiratory Protection:	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Hygiene measures:	Do not eat, drink or smoke when using the product. Wash hands before breaks and immediately after handling the product.
Environmental Controls:	No data available.

SECTION 9: Physical And Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance	
Physical state:	Liquid
Form:	Liquid
Colour:	Various
Odour:	weak, not characteristic
Odour Threshold:	No data available.
pH:	No data available.
Freezing point:	0 °C
Boiling Point:	100 °C
Flash Point:	No data available.
Evaporation Rate:	No data available.
Flammability (solid, gas):	No data available.
Flammability limit - upper (%)	53 %(V)
Flammability limit - lower (%)	3,2 %(V)
Vapour pressure:	1.100 hPa (50 °C) 23 hPa (20 °C)
Vapour density (air=1):	No data available.
Density:	1,02 g/cm3 (20 °C)
Relative density:	No data available.
Solubility(ies)	
Solubility in Water:	Completely soluble in water
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Autoignition Temperature:	No data available.
Decomposition Temperature:	No data available.
Viscosity:	No data available.
Explosive properties:	No data available.
Oxidising Properties:	No data available.

9.2 Other information

VOC content:	62,9 g/l ~1,97 % EC Directive 2004/42: 279,5 g/l ~27,95 % (calculated)
Minimum ignition temperature:	398 °C
Metal corrosion:	

SECTION 10: Stability and Reactivity

10.1 Reactivity:	No dangerous reaction known under conditions of normal use.
10.2 Chemical Stability:	Material is stable under normal conditions.
10.3 Possibility of Hazardous Reactions:	Hazardous polymerization does not occur.
10.4 Conditions to Avoid:	No special precautions.
10.5 Incompatible Materials:	None known.
10.6 Hazardous Decomposition Products:	Not determined.

SECTION 11: Toxicological Information

Information on likely routes of exposure

Inhalation:	None known or expected under normal use.
Skin Contact:	None known or expected under normal use.
Eye contact:	Causes serious eye damage.
Ingestion:	No adverse effects due to ingestion are expected.

11.1 Information on toxicological effects

Acute toxicity

Oral

Product:	LD 50: 4.700 mg/kg LD L0: 786 mg/kg
Specified substance(s)	
Ethylene glycol	LD 50 (Rat): 5,89 g/kg LD 50 (Cat): 1.650 mg/kg
ALUMINIUM SULFATE, n-HYDRATE	No data available.
ACETIC ACID	LD 50 (Rabbit): 1.200 mg/kg LD 50 (Mouse): 4.960 mg/kg LD 50 (Rat): 3,53 g/kg LD 50 (Rat): 3,31 g/kg

Dermal

Product:	LD 50 9.530 mg/kg
Specified substance(s)	
Ethylene glycol	LD 50 (Rabbit) : 9.530 mg/kg
ALUMINIUM SULFATE, n-HYDRATE	No data available.
ACETIC ACID	LD 50 (Rabbit) : 1.060 mg/kg

Inhalation

Product:	Not classified for acute toxicity based on available data.
Specified substance(s)	
Ethylene glycol	No data available.

ALUMINIUM SULFATE, n-HYDRATE	No data available.
ACETIC ACID	LC 50 (Rat, 4 h): 11,4 mg/l

Repeated dose toxicity

Product:	None known.
Specified substance(s)	
Ethylene glycol	No data available.
ALUMINIUM SULFATE, n-HYDRATE	No data available.
ACETIC ACID	No data available.

Skin Corrosion/Irritation:

Product:	Not known.
Specified substance(s)	
Ethylene glycol	No data available.
ALUMINIUM SULFATE, n-HYDRATE	No data available.
ACETIC ACID	No data available.

Serious Eye Damage/Eye Irritation:

Product:	Not known.
Specified substance(s)	
Ethylene glycol	No data available.
ALUMINIUM SULFATE, n-HYDRATE	No data available.
ACETIC ACID	No data available.

Respiratory or Skin Sensitisation:	Not a skin sensitiser.
Product:	
	Not a skin nor a respiratory sensitizer.
Specified substance(s)	
Ethylene glycol	No data available.
ALUMINIUM SULFATE, n-HYDRATE	No data available.
ACETIC ACID	No data available.

Germ Cell Mutagenicity

In vitro

Product:	No mutagenic components identified
Specified substance(s)	
Ethylene glycol	No data available.
ALUMINIUM SULFATE, n-HYDRATE	No data available.
ACETIC ACID	No data available.

In vivo

Product:	No mutagenic components identified
Specified substance(s)	
Ethylene glycol	No data available.
ALUMINIUM SULFATE, n-HYDRATE	No data available.
ACETIC ACID	No data available.

Carcinogenicity

Product:	This substance has no evidence of carcinogenic properties.
Specified substance(s)	
Ethylene glycol	No data available.
ALUMINIUM SULFATE, n-HYDRATE	No data available.
ACETIC ACID	No data available.

Reproductive toxicity

Product:	No components toxic to reproduction
Specified substance(s)	
Ethylene glycol	No data available.
ALUMINIUM SULFATE, n-HYDRATE	No data available.
ACETIC ACID	No data available.

Specific Target Organ Toxicity - Single Exposure

Product:	None known.
Specified substance(s)	
Ethylene glycol	No data available.
ALUMINIUM SULFATE, n-HYDRATE	No data available.
ACETIC ACID	No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product:	Causes damage to organs through prolonged or repeated exposure. None known.
Specified substance(s)	
Ethylene glycol	No data available.
ALUMINIUM SULFATE, n-HYDRATE	No data available.
ACETIC ACID	No data available.

Aspiration Hazard

Product:	Not classified
Specified substance(s)	
Ethylene glycol	No data available.
ALUMINIUM SULFATE, n-HYDRATE	No data available.
ACETIC ACID	No data available.

Other Adverse Effects: None known.

SECTION 12: Ecological Information

General information: Not regulated

12.1 Toxicity

Acute toxicity

Fish

Product:	EC 50 (24 h): > 10.000 mg/l EC 50 (48 h): 41.100 mg/l LC 50 (Rainbow trout, 96 h): 41.000 mg/l LC 50 (Fathead minnow, 96 h): 53.000 mg/l

Specified substance(s)

Ethylene glycol	LC 50 (Bluegill (Lepomis macrochirus), 96 h): 27.540 mg/l (Static) Mortality LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 96 h): 36.000 - 47.000 mg/l (Static) Mortality LC 50 (Fathead minnow (Pimephales promelas), 96 h): 40.000 - 60.000 mg/l (Static) Mortality
ALUMINIUM SULFATE, n-HYDRATE	No data available.
ACETIC ACID	LC 50 (Carp (Leuciscus idus melanotus), 48 h): 410 mg/l Mortality LC 50 (Fathead minnow (Pimephales promelas), 1 h): 175 mg/l (Static) Mortality LC 50 (Channel catfish (Ictalurus punctatus), 1 h): 889 mg/l (Static) Mortality LC 50 (Fathead minnow (Pimephales promelas), 1 h): > 315 mg/l (Static) Mortality LC 50 (Channel catfish (Ictalurus punctatus), 2 h): 446 mg/l (Static) Mortality

Aquatic Invertebrates

Product: No data available.

Specified substance(s)

Ethylene glycol	LC 50 (Water flea (Daphnia magna), 48 h): 37.800 - 45.100 mg/l (Static) Mortality LC 50 (Water flea (Ceriodaphnia dubia), 48 h): 4.600 - 8.800 mg/l (Static) Mortality
ALUMINIUM SULFATE, n-HYDRATE	No data available.
ACETIC ACID	EC 50 (Pond snail (Lymnaea emarginata angulata), 24 h): 390 mg/l (Static) Intoxication EC 50 (Liver elimia, river snail (Elimia livescens), 24 h): 640 mg/l (Static) Intoxication EC 50 (Water flea (Daphnia magna), 24 h): 71 mg/l (Static) Intoxication EC 50 (Pond snail (Lymnaea emarginata angulata), 48 h): 320 mg/l (Static) Intoxication EC 50 (Liver elimia, river snail (Elimia livescens), 48 h): 460 mg/l (Static) Intoxication

Chronic toxicity

Fish

Product: No data available.

Specified substance(s)

Ethylene glycol	No data available.
ALUMINIUM SULFATE, n-HYDRATE	No data available.
ACETIC ACID	No data available.

Aquatic Invertebrates

Product: No data available.

Specified substance(s)

Ethylene glycol	No data available.
ALUMINIUM SULFATE, n-HYDRATE	No data available.
ACETIC ACID	No data available.

Toxicity to aquatic plants

Product: No data available.

Specified substance(s)

Ethylene glycol	No data available.
ALUMINIUM SULFATE,	No data available.

n-HYDRATE	
ACETIC ACID	No data available.

12.2 Persistence and Degradability

Biodegradation

Product:	There is no data on the degradability of this product.

Specified substance(s)

Ethylene glycol	No data available.
ALUMINIUM SULFATE, n-HYDRATE	No data available.
ACETIC ACID	No data available.

BOD/COD Ratio

Product	Not determined.

Specified substance(s)

Ethylene glycol	No data available.
ALUMINIUM SULFATE, n-HYDRATE	No data available.
ACETIC ACID	No data available.

12.3 Bioaccumulative Potential

Product:	Not known.

Specified substance(s)

Ethylene glycol	Crayfish (Procambarus), Bioconcentration Factor (BCF): 0,61 (Flow through) Crayfish (Procambarus), Bioconcentration Factor (BCF): 0,6 (Flow through) Crayfish (Procambarus), Bioconcentration Factor (BCF): 0,48 (Flow through) Crayfish (Procambarus), Bioconcentration Factor (BCF): 0,4 (Flow through) Crayfish (Procambarus), Bioconcentration Factor (BCF): 0,42 (Flow through)
ALUMINIUM SULFATE, n-HYDRATE	No data available.
ACETIC ACID	No data available.

12.4 Mobility in Soil: No data available.

Known or predicted distribution to environmental compartments

Ethylene glycol	No data available.
ALUMINIUM SULFATE, n-HYDRATE	No data available.
ACETIC ACID	No data available.

12.5 Results of PBT and vPvB assessment: Not available.

Ethylene glycol	No data available.
ALUMINIUM SULFATE, n-HYDRATE	No data available.
ACETIC ACID	No data available.

12.6 Other Adverse Effects: When diluted with a large amount of water, this material released directly or indirectly into the environment is not expected to have a significant impact.

12.7 Additional Information: No data available.

SECTION 13: Disposal Considerations

13.1 Waste treatment methods

General information: Dispose of waste and residues in accordance with local authority requirements.

Disposal methods: Discharge, treatment, or disposal may be subject to national, state, or local laws. Do not allow to enter drains, sewers or watercourses.

SECTION 14: Transport Information

ADR
Not regulated.

RID
Not regulated.

IMDG
Not regulated.

IATA
Not regulated.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code: not applicable

SECTION 15: Regulatory information

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

EU Regulations

Regulation (EC) No. 2037/2000 Substances that deplete the ozone layer: none

Regulation (EC) No. 850/2004 on persistent organic pollutants: none

Regulation (EC) No. 689/2008 Import and export of dangerous chemicals: none

Regulation (EC) No. 1907/2006 REACH Annex XIV Substance subject to authorisation, as amended: none

Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use: none

Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens and mutagens at work.: none

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breast feeding.: none

Directive 96/82/EC (Seveso III): on the control of major accident hazards involving dangerous substances:

Chemical name	CAS-No.	Concentration
ACETIC ACID	64-19-7	1,0 - 10%

EU. Regulation No. 166/2006 PRTR (Pollutant Release and Transfer Registry), Annex II: Pollutants:

none

Directive 98/24/EC on the protection of workers from the risks related to chemical agents at work:

Chemical name	CAS-No.	Concentration
ALUMINIUM SULFATE, n-HYDRATE	17927-65-0	2,5 - <10%

Directive 98/24/EC on the protection of workers from the risks related to chemical agents at work:

Chemical name	CAS-No.	Concentration
Ethylene glycol	107-21-1	20 - 30%
ACETIC ACID	64-19-7	1,0 - 10%

15.2 Chemical safety assessment: No Chemical Safety Assessment has been carried out.

SECTION 16: Other Information

Revision Information: Not relevant.

References

PBT	PBT: persistent, bioaccumulative and toxic substance.
vPvB	vPvB: very persistent and very bioaccumulative substance.

Key literature references and sources for data: No data available.

Wording of the H-statements in sections 2 and 3

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H373	May cause damage to organs through prolonged or repeated exposure.

Training information: No data available.

Issue Date: 23.11.2017
SDS No.:

Disclaimer:

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