SAFETY DATA SHEET

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

Issue Date 30-Jan-2014 **Revision Date** 14-Feb-2023 **Version** 3

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Code(s) 2833349

Product Name High Range Hardness Quality Control Standard

Unique Formula Identifier (UFI) DF7Q-XNGN-W308-0QPM

Molecular weight Not applicable

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

Recommended Use Water Analysis. Standard solution.

Uses advised against Consumer use

1.3. Details of the supplier of the safety data sheet

Supplier
HACH UK
Laser House
Ground Floor, Suite B
Waterfront Quay, Salford Quays
GB - Manchester, M50 3XW
Tel. +44 (0) 161 872 1487
info-uk@hach.com

HACH Ireland
Unit 34 GB Business Park
Little Island
IRL-Co. Cork
T45 H681
Tel. +353 (0)146 02 522
info-ie@hach.com

1.4. Emergency telephone number

UK: Poison Control Center Mainz: Tel: +49 (0) 6131 19240 - 24 hour emergency service
IE: National Poisons Information Centre (NPIC) 01 809 2566 (24/7)

Section 2: HAZARDS 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 [CLP]

Corrosive to metals	Category 1 - (H290)

Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 1 - (H318)

2.2. Label elements

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

Signal word
Danger

Hazard statements
This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]
H290 - May be corrosive to metals
H315 - Causes skin irritation
H318 - Causes serious eye damage
EUH208 - Contains Glutaraldehyde May produce an allergic reaction.

Precautionary Statements - EU (§28, 1272/2008)
P234 - Keep only in original container
P280 - Wear protective gloves and eye/face protection
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
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
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse
P390 - Absorb spillage to prevent material damage

2.3. Other hazards
No information available.

PBT & vPvB
This mixture contains no substance considered to be persistent, bioaccumulating or toxic (PBT)
This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB)

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	CAS No. EC No. Index No.	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Nitric acid	7697-37-2	<1%	Ox. Liq. 3 - H272	Ox. Liq. 3 :: C>=65%	-	-

Chemical name	CAS No. EC No. Index No.	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
	(007-004-00-1) (007-030-00-3) (078-012-00-0) 231-714-2 007-030-00-3		Met. Corr. 1 - H290 Skin Corr. 1A - H314 Eye Dam. 1 - H318 Acute Tox. 3 - H331	Skin Corr. 1A :: C>=20% Skin Corr. 1B :: 5%<=C<20%		
Glutaraldehyde	111-30-8 203-856-5 605-022-00-X	<0.1%	Flam. Liq. 4 - H227 Acute Tox. 3 - H301 Skin Corr. 1B - H314 Skin Sens. 1A - H317 Eye Dam. 1 - H318 Acute Tox. 2 - H330 Resp. Sens. 1 - H334 STOT SE 3 - H335 Aquatic Acute 1 - H400 Aquatic Chronic 2 - H411	STOT SE 3 :: 0.5%<=C<5%	1	1

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

Acute Toxicity Estimate *If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components*

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Glutaraldehyde 111-30-8	134 mg/kg	None reported	0.39 mg/L	None reported	None reported

Section 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. 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 immediate medical attention.

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 Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a doctor.

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 Burning sensation. May cause allergic skin reaction.

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

Note to doctors Treat symptomatically.

Section 5: FIREFIGHTING 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 Thermal decomposition can lead to release of irritating and toxic gases and vapours.

Hazardous combustion products This material will not burn.

5.3. Advice for firefighters

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

Additional information Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Section 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.

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 Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). 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.

Section 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. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it 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. Wash hands before breaks and after work.

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. Keep out of the reach of children. Store away from other materials.

7.3. Specific end use(s)

Specific use(s) Analytical reagent.
Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure Limits

Chemical name	European Union	United Kingdom	Ireland
Nitric acid 7697-37-2	-	STEL: 1 ppm STEL: 2.6 mg/m³	STEL: 1 ppm STEL: 2.6 mg/m³
Glutaraldehyde 111-30-8	-	TWA: 0.05 ppm TWA: 0.2 mg/m³ STEL: 0.05 ppm STEL: 0.2 mg/m³ Sen+	STEL: 0.05 ppm STEL: 0.2 mg/m³ Sens+

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

Additional information No information available.

8.2. Exposure controls

Engineering controls Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Personal protective equipment
Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Wear suitable gloves. Barrier creams may help to protect the exposed areas of skin. Gloves

must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and the standard EN 374-1:2016 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III acco.

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
Long term (repeated)	Wear protective Viton™ gloves	0,70 mm	>480 minutes
Short term	Wear protective nitrile rubber gloves	0,20 mm	>30 minutes

Skin and body protection Avoid contact with eyes, skin and clothing. Wear suitable protective clothing. Long sleeved clothing.

Respiratory protection Ensure adequate ventilation. No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Recommended filter type: ABEK-P3.

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. Wash hands before breaks and after work.

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state Liquid

Colour colourless **Odour** Odourless

Odour threshold Not applicable

Property	Values	Remarks • Method
Molecular weight	Not applicable	
pH	~ 2.0	@ 20 °C
Melting point / freezing point	~ 0 °C / 32 °F	
Initial boiling point and boiling range	~ 100 °C / 212 °F	
Evaporation rate	1 (water = 1)	
Vapour pressure	23.777 mm Hg / 3.17 kPa at 25 °C / 77 °F	
Relative vapor density	0.62	
Specific Gravity	1.0062	
Partition coefficient	No data available	
Soil Organic Carbon-Water Partition Coefficient	No data available	
Autoignition temperature	No data available	

Decomposition temperature	No data available	
Dynamic viscosity	No data available	
Kinematic viscosity	No data available	
Relative density	1.0062 g/mL	@ 20 °C

Solubility(ies)

Water solubility

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	25 °C / 77 °F

Solubility in other solvents

Chemical Name	Solubility classification	Solubility	Solubility Temperature
Acid	Soluble	> 1000 mg/L	25 °C / 77 °F

Metal Corrosivity

Steel Corrosion Rate	7.72 mm/yr
Aluminum Corrosion Rate	7.72 mm/yr

Explosive properties

Upper explosion limit	Not applicable
Lower explosion limit	Not applicable

Flammable properties

Flash point	No data available

Flammability

Upper flammability limit:	No data available
Lower flammability limit	No data available

Oxidising properties	No data available.
Bulk density	Not applicable

9.2. Other information

No information available.

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

Reactivity Corrosive to metal.

10.2. Chemical stability

Stability Stable under normal conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

Hazardous polymerisation Hazardous polymerisation 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 Oxidising agent. Strong acids. Strong bases.

10.6. Hazardous decomposition products

Hazardous Decomposition Products Thermal decomposition can lead to release of irritating and toxic gases and vapours.

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity
Based on available data, the classification criteria are not met

Mixture No data available.

Substance Test data reported below.

Oral Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Carbonic acid, calcium salt (1:1)	Rat LD_{50}	6450 mg/kg	None reported	None reported	GESTIS
Magnesium nitrate	Rat LD_{50}	5440 mg/kg	None reported	None reported	IUCLID
Glutaraldehyde	Rat LD_{50}	134 mg/kg	None reported	None reported	GESTIS

Inhalation (Dust/Mist) Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Glutaraldehyde	Rat LC_{50}	0.39 mg/L	4 hours	None reported	ECHA

Inhalation (Vapor) Exposure Route:

Acute Toxicity Estimate (ATE)

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

ATEmix (inhalation-vapour)	1,588.50 mg/l

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

Skin corrosion/irritation
Classification based on data available for ingredients. Irritating to skin.

Mixture No data available.

Substance Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Nitric acid	Existing human experience	Human	None reported	None reported	Corrosive to skin	ERMA
Carbonic acid, calcium salt (1:1)	Draize Test	Rabbit	500 mg	24 hours	Moderate	RTECS
Magnesium nitrate	Draize Test	Rabbit	500 mg	24 hours	Skin irritant	HSDB
Glutaraldehyde	OECD Test 404: Acute Dermal Corrosion/Irritation	Rabbit	0.5 mL	4 hours	Corrosive to skin	ECHA

Serious eye damage/eye irritation
Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.

Mixture No data available.

Substance Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Nitric acid	Existing human experience	Human	None reported	None reported	Corrosive to eyes	ERMA
Carbonic acid, calcium salt (1:1)	Draize Test	Rabbit	0.750 mg	24 hours	SEVERE	RTECS
Magnesium nitrate	Draize Test	Rabbit	500 mg	24 hours	Eye irritant	HSDB
Glutaraldehyde	Draize Test	Rabbit	0.1 mL	24 hours	Corrosive to eyes	ECHA

Respiratory or skin sensitisation
Based on available data, the classification criteria are not met.

Mixture No data available.

Substance Test data reported below.

Skin Sensitization Exposure Route:

Chemical name	Test method	Species	Results	Key literature references and sources for data
Glutaraldehyde	Open Epicutaneous Test	Guinea pig	Confirmed to be a skin sensitizer	ECHA

Respiratory Sensitization Exposure Route:

Chemical name	Test method	Species	Results	Key literature references and sources for data
Glutaraldehyde	Based on human experience	Human	Confirmed to be a respiratory sensitizer	NITE

STOT - single exposure
Based on available data, the classification criteria are not met.

Mixture No data available.

Substance Test data reported below.

Dermal Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Nitric acid	Rat TD_{Lo}	226500 mg/kg	None reported	**Blood** Methemoglobinemia-Carboxyhemoglobin	RTECS

Inhalation (Vapor) Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Nitric acid	Rat TC_{Lo}	460 mg/L	1 hours	**Nutritional and Gross Metabolic** Weight loss or decreased weight gain	RTECS

STOT - repeated exposure
Based on available data, the classification criteria are not met.

Mixture No data available.

Substance Test data reported below.

Oral Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Glutaraldehyde	Rat NOAEL	29.9 mg/kg	90 days	**Nutritional and Gross Metabolic** Weight loss or decreased weight gain	ECHA

Dermal Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Glutaraldehyde	Rat NOAEL	150 mg/kg	90 days	No toxicological effects observed	ECHA

Inhalation (Vapor) Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Nitric acid	Rat TC_{Lo}	0.001071 mg/L	84 days	**Behavioral** Muscle contraction or spasticity **Biochemical** Enzyme inhibition, induction, or change in blood or tissue levels (true cholinesterase) **Kidney, Ureter, or Bladder** Other changes in urine composition	RTECS
Glutaraldehyde	Rat NOAEC	0.125 mg/L	730 days	**Nutritional and Gross Metabolic** Weight loss or decreased weight gain	ECHA

Germ cell mutagenicity
Based on available data, the classification criteria are not met.

Mixture invitro **Data** No data available.

Substance invitro **Data** Test data reported below.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Glutaraldehyde	Mutation in microorganisms	*Salmonella typhimurium*	5 mg/plate	None reported	Positive test result for mutagenicity	ECHA

Mixture invivo **Data** No data available.

Substance invivo **Data** No data available.

Carcinogenicity
Based on available data, the classification criteria are not met.

Mixture No data available.

Substance Test data reported below.

Oral Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Glutaraldehyde	Rat TD_{Lo}	2912 mg/kg	2 years	**Blood** Leukemia	RTECS

Reproductive toxicity
Based on available data, the classification criteria are not met.

Mixture No data available.

Substance Test data reported below.

Oral Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Nitric acid	Rat TD_{Lo}	21150 mg/kg	21 days	**Effects on Embryo or Fetus** Fetotoxicity (except death e.g. stunted fetus)	RTECS
Glutaraldehyde	Rat NOAEL	500 ppm	Multiple generations	No reproductive or developmental toxic effects observed	ECHA

Aspiration hazard
Based on available data, the classification criteria are not met.

11.2 Information on other hazards
Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

11.2.1. Endocrine disrupting properties
Endocrine disrupting properties No information available.

11.2.2. Other information
Other adverse effects No information available.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity Based on available data, the classification criteria are not met.

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

Mixture

Acute aquatic toxicity: No data available.

Aquatic Chronic Toxicity: No data available.

Substance

Acute aquatic toxicity: Test data reported below.

Fish:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Carbonic acid, calcium salt (1:1)	96 hours	*Gambusia affinis*	LC_{50}	56000 mg/L	PEEN
Magnesium nitrate	96 hours	*Lepomis macrochirus*	LC_{50}	9000 mg/L	ECHA
Glutaraldehyde	96 hours	None reported	LC_{50}	3.5 mg/L	GESTIS

Crustacea:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Magnesium nitrate	48 Hours	*Daphnia magna*	EC_{50}	880 mg/L	ECHA
Glutaraldehyde	48 Hours	None reported	EC_{50}	0.75 mg/L	GESTIS

Algae:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Magnesium nitrate	72 Hours	*Scenedesmus subspicatus*	EC_{50}	> 100 mg/L	ECHA
Glutaraldehyde	72 Hours	*Scenedemus subspicatus*	EC_{50}	0.6 mg/L	ECHA

Aquatic Chronic Toxicity: Test data reported below.

Algae:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Glutaraldehyde	None reported	*Scenedemus subspicatus*	NOEC	< 0.0391 mg/L	ECHA

12.2. Persistence and degradability

Mixture No data available.

12.3. Bioaccumulative potential

Mixture: No data available.

Partition coefficient No data available

12.4. Mobility in soil

Soil Organic Carbon-Water Partition Coefficient No data available

12.5. Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

Chemical name	PBT and vPvB assessment
Nitric acid	The substance is not PBT / vPvB
Glutaraldehyde	The substance is not PBT / vPvB

12.6. Endocrine disrupting properties

Endocrine Disruptor Information: This product does not contain any known or suspected endocrine disruptors

12.7. Other adverse effects

No information available.

Ozone: Not applicable

Ozone depletion potential (ODP): No information available

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Advice on Disposal

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

Waste disposal number of waste from residues/unused products

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste.

Waste disposal number of used product

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste.

Contaminated packaging Dispose of contents/containers in accordance with local regulations.

Other Information Waste codes should be assigned by the user based on the application for which the product was used.

Section 14: TRANSPORT INFORMATION

IMDG

14.1 UN number or ID number UN3264

14.2 Proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
14.3 Transport hazard class(es)	8
14.4 Packing Group	III
Description	UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID), 8, III
14.5 Marine pollutant	Not applicable
14.6 Special precautions for user	223, 274
EmS-No	F-A, S-B
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code	Not applicable

ADR

14.1 UN number or ID number	3264
14.2 Proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
14.3 Transport hazard class(es)	8
Labels	8
14.4 Packing Group	III
Description	3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Nitric acid), 8, III
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	274
Classification code	C1
Tunnel restriction code	(E)

IATA

14.1 UN number or ID number	UN3264
14.2 Proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s.
14.3 Transport hazard class(es)	8
14.4 Packing group	III
Description	UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Nitric acid), 8, III
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	See section 6-8 for more information
ERG Code	8L

Additional information
There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods.
If the item is not in a reagent set or kit, the classification given above applies.
If the item is part of a reagent set or kit the classification would change to the following:
UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.
If the item is not regulated, the Chemical Kit classification does not apply.

Section 15: REGULATORY INFORMATION

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

National regulations

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

Authorisations and/or restrictions on use:
This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
Nitric acid - 7697-37-2	75.	
Glutaraldehyde - 111-30-8	75.	

Persistent Organic Pollutants Not applicable

Dangerous substance category per Seveso Directive (2012/18/EU)
• Non-controlled

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

Germany

Water hazard class (WGK) slightly hazardous to water (WGK 1)

France

Occupational Illnesses (R-463-3, France)

Chemical name	French RG number	Title
Glutaraldehyde 111-30-8	RG 65,RG 66 RG 84 RG 15bis,RG 74	-

International Inventories

EINECS/ELINCS	Complies
TSCA	Complies
DSL/NDSL	Complies
ENCS	Complies
IECSC	Complies
KECL - Existing substances	Complies
PICCS	Complies
AICS	Complies

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
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 Chemical safety assessments for substances in this mixture were not carried out.

Section 16: OTHER INFORMATION

Issue Date 30-Jan-2014

Revision Date 14-Feb-2023

Revision Note New SDS, SDS sections updated, 3, 9, 11, 12.

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

Legend

**	Hazard Designation
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieure
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service Number
Ceiling	Maximum limit value
CLP	Classification, Labelling and Packaging of substances and mixtures [Regulation (EC) No. 1272/2008]
DNEL	Derived No Effect Level (DNEL)
EC	European Community
ECHA	ECHA (The European Chemicals Agency)
EC50	Effective Concentration to 50% of a test population
EEC	European Economic Community
EN	European Standard
IMDG	International Maritime Dangerous Goods (IMDG)
IATA	International Air Transport Association (IATA)
IATA-DGR	International Air Transport Association - Dangerous Goods Regulations
ICAO	International Civil Aviation Organization
ICAO-TI	International Civil Aviation Organization - Technical Instructions
IUCLID	IUCLID (The International Uniform Chemical Information Database)
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
LOAEL	Lowest observed adverse effect level
LOAEC	Lowest observed adverse effect concentration
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
MAK	Maximale Arbeitsplatz-Konzentration, a German expression corresponding to threshold limit value, which relates to safe daily exposure levels to chemical substances
NOAEL	NOAEL (No observed adverse effect level)
NOAEC	No observed adverse effect concentration
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labour)
PEC	Predicted Effect Concentration
PNEC	Predicted No Effect Concentration (PNEC)
PBT	Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals [Regulation (EC) No. 1907/2006])
RID	Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
TWA	TWA (time-weighted average)
SKN*	Skin designation
SKN+	Skin sensitisation
STEL	STEL (Short Term Exposure Limit)
STOT	Specific Target Organ Toxicity
STOT RE	Specific target organ toxicity — repeated exposure
STOT SE	Specific target organ toxicity — single exposure
SVHC	Substances of Very High Concern
TLV	Threshold Limit Value
TRGS	Technical rules for hazardous substances, Germany
TSCA	Toxic Substances Control Act
UN	United Nations
vPvB	very persistent and very bioaccumulative
VOC	Volatile organic compounds
AwSV	Administrative regulation of water polluting substances, Germany

Key literature references and sources for data
See Section 11: TOXICOLOGICAL INFORMATION
See Section 12: ECOLOGICAL INFORMATION

Classification procedure

Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - Vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	On basis of test data
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration toxicity	Calculation method
Ozone	Calculation method
Corrosive to metals	On basis of test data

Training Advice 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

Restrictions on use For Laboratory Use Only.

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

End of Safety Data Sheet