SAFETY DATA SHEET

00828 GB

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

1.1 Product identifier

Product name : 514-20 Conditioning solution
Product code : 3200695343, 3999960114

SDS Drawing Code : M003273B

Product description : Not available.

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

Identified uses

Electrode conditioning solution

Uses advised against

Not applicable.

1.3 Details of the supplier of the safety data sheet

HORIBA Advanced Techno Co., Ltd.

2, Miyanohigashi-cho, Kisshoin, Minami-ku, Kyoto, 601-8551 Japan

Tel: +81-75- 321-7184

HORIBA UK Limited

Kyoto Close, Moulton Park, Northampton, NN3 6FL, UK

Tel: +44-1604-542500

e-mail address of person

: techinfo.hor@jp.horiba.com

responsible for this SDS

National advisory body/Poison Centre

1.4 Emergency telephone number

Telephone number : 0344 892 0111 (Healthcare Professionals)

111 (Members of the public)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to UK CLP/GHS

Not classified.

The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

General: Read carefully and follow all instructions. Keep out of reach of children. If medical

advice is needed, have product container or label at hand.

Prevention: Wear protective gloves and eye or face protection.

Response : Get medical advice/attention.

Storage: Keep cool and protect from sunlight. Store locked up.

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SECTION 2: Hazards identification

Disposal

: Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements

: Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and : Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant

: Not applicable.

fastenings

articles

Tactile warning of danger : Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification

: None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Туре
tris(2-hydroxyethyl)ammonium hydroxyacetate	EC: 269-593-3 CAS: 68299-02-5	0.24	Not classified.	[2]
Sulfonic acids, petroleum, sodium salts	EC: 271-781-5 CAS: 68608-26-4	0.04	Not classified.	[2]
2,2',2"-nitrilotriethanol	EC: 203-049-8 CAS: 102-71-6	0.04	Skin Irrit. 2, H315 Eye Irrit. 2, H319	[1]
			See Section 16 for the full text of the H statements declared above.	

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Additional disclosure due to company policy

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact

: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation

occurs

Inhalation

: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact

: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

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SECTION 4: First aid measures

Ingestion

: Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Protection of first-aiders

: No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

Eye contact : No specific data. Inhalation : No specific data. Skin contact : No specific data. Ingestion : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

: Treat symptomatically. Contact poison treatment specialist immediately if large

quantities have been ingested or inhaled.

: No specific treatment. **Specific treatments**

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing

media

: None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous combustion

products

: No specific data.

5.3 Advice for firefighters

Special protective actions

for fire-fighters

: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to British standard BS EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

For emergency responders: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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SECTION 6: Accidental release measures

6.3 Methods and material for containment and cleaning up

Small spill

: Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill

: Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contain and collect spillage with non-combustible, absorbent material e. g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

6.4 Reference to other sections

: See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures

: Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific : Not available.

solutions

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

No exposure limit value known.

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures

: Reference should be made to monitoring standards, such as the following: British Standard BS EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) British Standard BS EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) British Standard BS EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

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SECTION 8: Exposure controls/personal protection

Product/ingredient name

2.2'.2"-nitrilotriethanol

Sulfonic acids, petroleum, sodium salts

Posult

DNEL - General population - Long term - Inhalation

0.33 mg/m³ Effects: Systemic

DNEL - Workers - Long term - Inhalation

0.66 mg/m³ Effects: Systemic

DNEL - General population - Long term - Oral

0.8333 mg/kg bw/day Effects: Systemic

DNEL - General population - Long term - Dermal

1.667 mg/kg bw/day Effects: Systemic

DNEL - Workers - Long term - Dermal

3.33 mg/kg bw/day Effects: Systemic

DNEL - General population - Long term - Dermal

70 μg/cm² Effects: Local

DNEL - Workers - Long term - Dermal

140 μg/cm² <u>Effects</u>: Local

DNEL - General population - Long term - Inhalation

0.4 mg/m³ Effects: Local

DNEL - Workers - Long term - Inhalation

1 mg/m³ Effects: Local

DNEL - General population - Long term - Dermal

2.66 mg/kg bw/day Effects: Systemic

DNEL - General population - Long term - Oral

3.3 mg/kg bw/day Effects: Systemic

DNEL - Workers - Long term - Dermal

7.5 mg/kg bw/day Effects: Systemic

PNECs

Not available.

8.2 Exposure controls

Appropriate engineering controls

: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

SECTION 8: Exposure controls/personal protection

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid. Colour Colourless. Odour Not available. **Odour threshold** Not available. Melting point/freezing point Not available. Initial boiling point and : Not available.

boiling range

: Not available. Flammability (solid, gas) Upper/lower flammability or : Not available.

explosive limits

Flash point

	Closed cup			Open cup		
Ingredient name	°C	°F	Method	°C	°F	Method
Sulfonic acids, petroleum, sodium salts				>160	>320	
2,2',2"-nitrilotriethanol	185	365				

Auto-ignition temperature

Ingredient name	°C	°F	Method
2,2',2"-nitrilotriethanol	324	615.2	

Decomposition temperature : Not available.

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SECTION 9: Physical and chemical properties

pH : Not available.

Viscosity : Dynamic (room temperature): Not available.

Kinematic (room temperature): Not available.

Kinematic (40°C): Not available.

Solubility in water : Not available.

Partition coefficient: n-octanol/ : Not available

water

Vapour pressure

	Vapour Pressure at 20°C			Vap	our pressu	re at 50°C
Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method
2,2',2"-nitrilotriethanol	<0.0075	<0.001				

Evaporation rate : Not available.

Relative density : Not available.

Vapour density : Not available.

Explosive properties : Not available.

Oxidising properties : Not available.

Particle characteristics

Median particle size : Not applicable.

9.2 Other information

Not available.

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : No specific data.

10.5 Incompatible materials : No specific data.

10.6 Hazardous decomposition products

: Under normal conditions of storage and use, hazardous decomposition products

should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name Result

Sulfonic acids, petroleum, sodium salts Rat - Oral - LD50

>5 g/kg

<u>Toxic effects</u>: Gross Metabolite Changes - Weight loss or

decreased weight gain

2,2',2"-nitrilotriethanol Rat - Oral - LD50

7.39 g/kg

Conclusion/Summary [Product]: Not available.

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SECTION 11: Toxicological information

Acute toxicity estimates

Product/ingredient name	Oral (mg/ kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	(vapours)	Inhalation (dusts and mists) (mg/l)
2,2',2"-nitrilotriethanol	7390	N/A	N/A	N/A	N/A

Skin corrosion/irritation

Product/ingredient name Result

2,2',2"-nitrilotriethanol Human - Skin - Mild irritant

<u>Duration of treatment/exposure</u>: 72 hours <u>Amount/concentration applied</u>: 15 mg I

Mouse - Skin - Severe irritant Amount/concentration applied: 50 %

Rabbit - Skin - Mild irritant

<u>Duration of treatment/exposure</u>: 24 hours <u>Amount/concentration applied</u>: 560 mg

Conclusion/Summary [Product]: Not available.

Serious eye damage/eye irritation

Product/ingredient name Result

2,2',2"-nitrilotriethanol Rabbit - Eyes - Mild irritant

Amount/concentration applied: 10 mg

Rabbit - Eyes - Severe irritant
Amount/concentration applied: 20 mg

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product]: Not available.

Respiratory or skin sensitization

Not available.

Skin

Conclusion/Summary [Product]: Not available.

Respiratory

Conclusion/Summary [Product]: Not available.

Germ cell mutagenicity

Not available.

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Not available.

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SECTION 11: Toxicological information

Conclusion/Summary [Product] : Not available.

Reproductive toxicity

Not available.

Conclusion/Summary [Product]: Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure

Not available.

Potential acute health effects

Eye contact
 Inhalation
 No known significant effects or critical hazards.
 Skin contact
 No known significant effects or critical hazards.
 Ingestion
 No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.
Inhalation : No specific data.
Skin contact : No specific data.
Ingestion : No specific data.

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

Short term exposure

Potential immediate : Not available.

effects

Potential delayed effects : Not available.

Long term exposure

Potential immediate : Not available.

effects

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary [Product]: Not available.

General : No known significant effects or critical hazards.
 Carcinogenicity : No known significant effects or critical hazards.
 Mutagenicity : No known significant effects or critical hazards.
 Reproductive toxicity : No known significant effects or critical hazards.

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SECTION 11: Toxicological information

Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name

2,2',2"-nitrilotriethanol

Result

Acute - LC50 - Fresh water

Fish - Fathead minnow - *Pimephales promelas* Age: 30 days; <u>Size</u>: 18.1 mm; <u>Weight</u>: 0.083 g

11.8 g/l [96 hours] Effect: Mortality

Chronic - NOEC - Fresh water

Daphnia - Water flea - Daphnia magna

16 mg/l [21 days] Effect: Behavior

Acute - EC50 - Fresh water

Crustaceans - Water flea - Ceriodaphnia dubia - Neonate

Age: <24 hours

609.98 mg/l [48 hours] Effect: Intoxication

Conclusion/Summary [Product] : Not available.

12.2 Persistence and degradability

Not available.

Conclusion/Summary [Product] : Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
2,2',2"-nitrilotriethanol	-1	<3.9 [OECD 305]	Low

12.4 Mobility in soil

Soil/water partition

coefficient

: Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

Product/ingredient name	PBT	Р	В	T	vPvB	vP	vB
tris(2-hydroxyethyl) ammonium hydroxyacetate	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sulfonic acids, petroleum, sodium salts	No	No	No	No	No	No	No
2,2',2"-nitrilotriethanol	No	N/A	No	No	No	N/A	No

12.6 Other adverse effects: No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal

The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste

: Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

Packaging

Methods of disposal

The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions

This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.

user

14.6 Special precautions for : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to IMO instruments

: Not available.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture **UK (GB)/REACH**

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed above the relevant limit.

Substances of very high concern

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SECTION 15: Regulatory information

None of the components are listed above the relevant limit.

Ozone depleting substances

Not listed.

Prior Informed Consent (PIC)

Not listed.

Persistent Organic Pollutants

Not listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

No listed substance

Seveso Directive

This product is not controlled under the Seveso Directive.

EU regulations

Industrial emissions

: Not listed

(integrated pollution

prevention and control) -

Air

Industrial emissions

: Not listed

(integrated pollution prevention and control) -

Water

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

15.2 Chemical safety assessment

 This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms

: ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of

Dangerous Goods by Road ATE = Acute Toxicity Estimate

GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and

Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019

No. 720 and amendments

DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level

EUH statement = GB CLP-specific Hazard statement IATA = International Air Transport Association IMDG = International Maritime Dangerous Goods

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SECTION 16: Other information

IMO = International Maritime Organization

N/A = Not available

PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration

RID = The Regulations concerning the International Carriage of Dangerous Goods

by Rail

RRN = REACH Registration Number

SGG = Segregation Group

vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification

Not classified.

Full text of abbreviated H statements

H315 Causes skin irritation.
H319 Causes serious eye irritation.

Full text of classifications

Eye Irrit. 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2

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Skin Irrit. 2 SKIN CORROSION/IRRITATION - Category 2

Date of issue/ Date of

revision

Date of previous issue : 8/5/2021

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the abovenamed supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot quarantee that these are the only hazards that exist.