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SDS No: 776
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TelChem SpaCare pH Reducer

Cromag Pty Ltd
Safety Data Sheet according to WHS and ADG requirements

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier

Product name	TelChem SpaCare pH Reducer
Chemical Name	Sodium Hydrogen Sulphate
Synonyms	Sodium bisulphate, Dry acid, pH reducer
Proper shipping name	Not Applicable
Chemical formula	$NaHSO_4$
Other means of identification	Not Available

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

Relevant Identified Uses	Lowers pH in Spa Water

Details of the supplier of the safety data sheet

Company Name	**Cromag Pty Ltd – Trading as Telford Industries & Sigma Chemicals**
Address	**7 Valentine Street Kewdale WA 6105 Australia**
Telephone	**+61 8 9353 2053**
Website	**www.telfordindustries.com.au / www.sigmachemicals.com.au**
Email	**info@telfordindustries.com.au / info@sigmachemicals.com.au**

Emergency telephone number

Association/Organisation	**Not Available**
Emergency telephone numbers	**DFES: 000 (HAZMAT EMERGENCIES)**
Other Emergency telephone numbers	**POISONS: 13 11 26**

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

HAZARDOUS CHEMICAL. NOT DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.

Poisons Schedule	**S5**
Classification	Serious Eye Damage/Irritation Category 1

Label Elements

GHS label elements	
SIGNAL WORD	**DANGER**

Hazard statement(s)

H318	Causes serious eye damage.

Precautionary statement(s) Prevention

P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement(s) Response

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

Precautionary statement(s) Storage

No storage statement.

Precautionary statement(s) Disposal

P501	Dispose of contents/container in accordance with local regulations.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

CAS No	% [weight]	Name
7681-38-1	>93	sodium hydrogen sulphate

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: ➢ Immediately hold eyelids apart and flush the eye continuously with running water. ➢ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ➢ Continue flushing until advised to stop by the Poisons Information Centre or for at least 15 minutes. ➢ Transport to hospital or doctor without delay. ➢ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin or hair contact occurs: ➢ Immediately flush body and clothes with large amounts of water, using safety shower if available. ➢ Quickly remove all contaminated clothing, including footwear. ➢ Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre. ➢ Transport to hospital, or doctor.
Inhalation	➢ If fumes or combustion products are inhaled remove from contaminated area. ➢ Lay patient down. Keep warm and rested. ➢ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.

	➢ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. ➢ Transport to hospital, or doctor, without delay.
Ingestion	➢ For advice, contact a Poisons Information Centre or a doctor at once. ➢ Urgent hospital treatment is likely to be needed. ➢ If swallowed do NOT induce vomiting. ➢ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. ➢ Observe the patient carefully. ➢ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. ➢ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. ➢ Transport to hospital or doctor without delay.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
For acute or short-term repeated exposures to strong acids:

- Airway problems may arise from laryngeal edema and inhalation exposure. Treat with 100% oxygen initially.
- Respiratory distress may require cricothyroidotomy if endotracheal intubation is contraindicated by excessive swelling
- Intravenous lines should be established immediately in all cases where there is evidence of circulatory compromise.

INGESTION:

- Immediate dilution (milk or water) within 30 minutes post ingestion is recommended.
- DO NOT attempt to neutralise the acid since exothermic reaction may extend the corrosive injury.
- Be careful to avoid further vomit since re-exposure of the mucosa to the acid is harmful. Limit fluids to one or two glasses in an adult.
- Charcoal has no place in acid management.
- Some authors suggest the use of lavage within 1 hour of ingestion.

Supportive care involves the following:

- Withhold oral feedings initially.
- If endoscopy confirms transmucosal injury start steroids only within the first 48 hours.
- Carefully evaluate the amount of tissue necrosis before assessing the need for surgical intervention.
- Patients should be instructed to seek medical attention whenever they develop difficulty in swallowing (dysphagia).

SKIN:

- Skin lesions require copious saline irrigation. Treat chemical burns as thermal burns with non-adherent gauze and wrapping.

EYE:

- Eye injuries require retraction of the eyelids to ensure thorough irrigation of the conjuctival cul-de-sacs. Irrigation should last at least 20-30 minutes.
- DO NOT use neutralising agents or any other additives. Several litres of saline are required.
- Cycloplegic drops, (1% cyclopentolate for short-term use or 5% homatropine for longer term use) antibiotic drops, vasoconstrictive agents or artificial tears may be indicated dependent on the severity of the injury.
- Steroid eye drops should only be administered with the approval of a consulting ophthalmologist).

[Ellenhorn & Barceloux: Medical Toxicology]

SECTION 5 FIREFIGHTING MEASURES

Extinguishing Media

- Water spray
- Dry chemical powder
- Carbon dioxide

Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.

Advice for firefighters

Fire Fighting	➢ Alert Fire Brigade and tell them location and nature of hazard. ➢ Wear full body protective clothing with breathing apparatus. ➢ Prevent, by any means available, spillage from entering drains or water course.
Fire/Explosion Hazard	➢ The material is not readily combustible under normal conditions. ➢ Not considered to be a significant fire risk. Decomposition may produce toxic fumes of: ➢ sulfur oxides (SOx)
HAZCHEM	Not Available

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	➢ Clean up all spills immediately. ➢ Avoid contact with skin and eyes. ➢ Control personal contact with the substance, by using protective equipment. ➢ Use dry clean up procedures and avoid generating dust. ➢ Place in a suitable, labeled container for waste disposal. ➢ Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material.
Major Spills	➢ Clear area of personnel and move upwind. ➢ Alert Fire Brigade and tell them location and nature of hazard. ➢ Wear full body protective clothing with breathing apparatus. ➢ Prevent, by any means available, spillage from entering drains or water course. ➢ Consider evacuation (or protect in place). ➢ Collect recoverable product into labelled containers for recycling. ➢ Neutralize/decontaminate residue (see Section 13 for specific agent). ➢ Wash area and prevent runoff into drains. ➢ If contamination of drains or waterways occurs, advise emergency services.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling	➢ Avoid all personal contact, including inhalation. ➢ Wear protective clothing when risk of exposure occurs. ➢ When handling DO NOT eat, drink or smoke. ➢ Keep containers securely sealed when not in use. ➢ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.
Other Information	➢ Store in original containers. ➢ Store in a cool, dry, well-ventilated area.

	➢ Store away from incompatible materials and foodstuff containers. ➢ Protect containers against physical damage and check regularly for leaks. ➢ Observe manufacturer's storage and handling recommendations contained within this SDS.

Conditions for safe storage, including any incompatibilities

Suitable Container	➢ **DO NOT** use aluminium or galvanised containers. ➢ Lined metal can, lined metal pail/ can. ➢ Plastic pail. ➢ Polyliner ➢ Drum ➢ Packing as recommended by manufacturer. ➢ Check all containers are clearly labelled and free from leaks.
Storage Incompatibility	➢ Avoid moisture absorption. ➢ Avoid storage with calcium hypochlorite, aluminium, alcohols, sodium carbonate.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Not Available

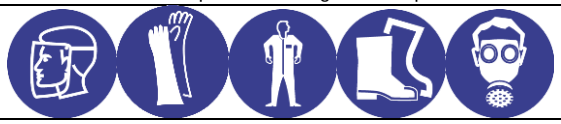
EMERGENCY LIMITS

Ingredient	Material Name	TEEL-1	TEEL-2	TEEL-3
sodium hydrogen sulphate	sodium hydrogen sulphate	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
sodium hydrogen sulphate	Not Available	Not Available

MATERIAL DATA

Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.
Personal Protection	
Eye and Face protection	➢ Safety glasses with imperforated side shields may be used where continuous eye protection is desirable, as in laboratories; ➢ Chemical goggle. whenever there is a danger of the material coming in contact with the eyes; goggles must be properly fitted. ➢ Full face shield (20 cm, 8 in minimum) may be required for supplementary but never for primary protection of eyes. ➢ Alternatively a gas mask may replace splash goggles and face shields.
Skin protection	See Hand protection below
Hands/feet protection	➢ Elbow length PVC gloves ➢ Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

Body protection	See Other protection below
Other protection	➢ Overalls. ➢ PVC Apron. ➢ PVC protective suit may be required if exposure severe. ➢ Eyewash unit. ➢ Ensure there is ready access to a safety shower.
Thermal hazards	Not Available

Respiratory protection

Type B-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Crystal or granular; soluble in water

Physical state	Solid	**pH as a Solution**	1.3 (10 g/L)
Odour	Not Available	**Molecular Weight (g/mole)**	104
Odour threshold	Not Available	**Flammability**	Not Applicable
Relative density (water=1)	1.4 – 1.5	**Upper Explosive Limit (%)**	Not Applicable
Colour	White	**Lower Explosive Limit (%)**	Not Applicable
pH (as supplied)	Not Applicable	**Vapour pressure (kPa)**	Not Available
Melting point/Freezing point (°C)	315	**Solubility in water (g/L)**	280 @ 25 °C
Initial boiling point and boiling range (°C)	460	**Vapour density (Air = 1)**	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	➢ Unstable in the presence of incompatible materials. ➢ Contact with alkaline material liberates heat. ➢ Product is considered stable. ➢ Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	Acidic corrosives produce respiratory tract irritation with coughing and mucous membrane damage.
Ingestion	The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion. Sulfate salts are poorly absorbed from the gastro-intestinal tract but because of osmotic activity are able to draw water from the lumen to produce diarrhoea (purging). Sulfate ion usually has little toxicological potential. Ingestion of acidic corrosives may produce circumoral burns with a distinct discolouration of the mucous membranes of the mouth, throat and oesophagus.
Skin Contact	The material can produce chemical burns following direct contact with the skin. Skin contact with acidic corrosives may result in pain and burns; these may be deep with distinct edges and may heal slowly with the formation of scar tissue.
Eye	The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating. Direct eye contact with acid corrosives may produce pain, lachrymation, photophobia and burns.
Chronic	Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.

Product Name	**TOXICITY**	**IRRITATION**
sodium hydrogen sulphate	Oral (rat) LD50: >2000 mg/kg[1]	Not Available

1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances*

sodium hydrogen sulphate	Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound.

Acute Toxicity	✗	**Carcinogenicity**	⊘
Skin Irritation/Corrosion	✓	**Reproductivity**	⊘
Serious Eye Damage/Irritation	✓	**STOT – single exposure**	⊘
Respiratory or Skin sensitisation	⊘	**STOT – repeated exposure**	⊘
Mutagenicity	⊘	**Aspiration Hazard**	⊘

Legend: ✗ *– Data available but does not fill the criteria for classification*
✓ *– Data required to make classification available*
⊘ *– Data Not Available to make classification*

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Ingredient	**Endpoint**	**Test Duration (hr)**	**Species**	**Value**	**Source**
sodium hydrogen sulfate	LC50	96	Fish	7960mg/L	2
sodium hydrogen sulfate	EC50	48	Crustacean	190mg/L	1
sodium hydrogen sulfate	EC50	96	Algae or other aquatic plants	105.72278mg/L	3
sodium hydrogen sulfate	EC50	384	Crustacean	4222.331mg/L	3
Legend:	*Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data*				

Persistence and degradability

Ingredient	**Persistence: Water/Soil**	**Persistence: Air**
sodium hydrogen sulphate	HIGH	HIGH

Bio accumulative potential

Ingredient	Bioaccumulation
sodium hydrogen sulphate	LOW (Log KOW = -2.2002)

Mobility in Soil

Ingredient	Mobility
sodium hydrogen sulphate	LOW (KOC = 6.124)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product/Packaging disposal	➢ Containers may still present a chemical hazard / danger when empty. ➢ **DO NOT** allow wash water from cleaning or process equipment to enter drains. ➢ In all cases disposal to sewer may be subject to local laws and regulations. ➢ Consult manufacturer for recycling options or consult local or regional waste management authority. ➢ Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

SECTION 14 TRANSPORT INFORMATION

Labels Required
Not Applicable

Land transport (ADG), Air transport (ICAO-IATA / DGR), Sea transport (IMDG-Code / GGVSee)
Not classified as Dangerous Goods according to the ADG Code.

Transport in bulk according to Annex II of MARPOL and the IBC code
Not Applicable

SECTION 15 REGULATORY INFORMATION

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

SODIUM HYDROGEN SULFATE (7681-38-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS) **Australia Hazardous Substances Information System - Consolidated Lists**

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Y
Canada - NDSL	N
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	Y
Korea - KECI	Y
New Zealand - NZIoC	Y
Philippines - PICCS	Y
USA - TSCA	Y

Legend:	*Y = All ingredients are on the inventory* *N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)*

SECTION 16 OTHER INFORMATION

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

Name	CAS No		
PC—TWA	Permissible Concentration-Time Weighted Average	**PC—STEL**	Permissible Concentration-Short Term Exposure Limit
IARC	International Agency for Research on Cancer	**ACGIH**	American Conference of Governmental Industrial Hygienists
STEL	Short Term Exposure Limit	**TEEL**	Temporary Emergency Exposure Limit
IDLH	Immediately Dangerous to Life or Health Concentrations	**OSF**	Odour Safety Factor
NOAEL	No Observed Adverse Effect Level	**LOAEL**	Lowest Observed Adverse Effect Level
TLV	Threshold Limit Value	**LOD**	Limit Of Detection
OTV	Odour Threshold Value	**BCF**	BioConcentration Factors
BEI	Biological Exposure Index		

END OF SDS