BRYCE LABORATORIES
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SAFETY DATA SHEET

Date of Preparation: 17 Feb 2017
Revision Date: N/A

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product name and code	BLEACH 5.25% (B2176027)
Other Means of Identification	-

Relevant Identified Uses and Restrictions

Recommended Use	Reagent; Chemical intermediate. Bleaching agent; sanitizer/disinfectant; organic chemical production
Recommended Restrictions	None known

Details of Distributor

Company	**Bryce Laboratories** 2266 Drew Road, #7 Mississauga, Ontario, Canada L5S 1B1	Supplier: Sprakita Products
Telephone	905-678-1548	
Fax	905-678-1649	
Email	sales@bryceindustriesinc.com	

Emergency Contact Information

24-Hour Emergency Number (USA)	CHEMTREC (USA) 800-424-9300
24-Hour Emergency Number (Canada)	CANUTEC (Canada) 613-996-6666

Section 2. HAZARDS IDENTIFICATION

Hazard Classification

OSHA Regulatory Status This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Physical Hazards	Corrosive to Metals	Category 1
Health Hazards	Skin Corrosion/Irritation	Category 1
	Serious eye damage/eye irritation	Category 1
	Specific Target Organ Toxicity, Single Exposure	Category 3 (respiratory)

Label Elements

Signal word Danger

Symbols

Hazard Statements

May be corrosive to metals.
Causes severe skin burns and eye damage.
May cause respiratory irritation.

Precautionary statements

Do not breathe mist or vapor.
Keep only in original packaging.
Wash thoroughly after handling.
Wear protective gloves/clothing and eye/face protection.
Absorb spillage to prevent material damage.

Response	Immediately call a POISON CENTER or doctor/physician
Inhalation	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Specific treatment (see supplemental first aid instructions on this label).
Skin	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
Eyes	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Ingestion	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
Storage	Store in corrosive resistant container with a resistant inner liner.
	Store locked up.
	Store in a well-ventilated place. Keep container tightly closed.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Other hazards	Other hazards which do not result in classification: Ingestion can cause irritation and corrosive action in the mouth, stomach and digestive tract. Toxic fumes, gases or vapours may evolve on burning.
Supplemental information	-

Section 3. COMPOSITION / INFORMATION ON INGREDIENTS

Mixtures

Components	Common names / synonyms	CAS #	Weight (%)
Sodium hypochlorite	Bleach	7681-52-9	4 – 6
Water	N/A	7732-18-5	94-96

The % concentrations for the above listed chemicals will vary from batch to batch. Concentrations listed represent the actual concentration range for each chemical

Section 4. FIRST AID MEASURES

Description of first aid measures

Inhalation	Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Seek immediate medical attention/advice
Skin contact	Remove/Take off immediately all contaminated clothing. Flush affected skin with gently flowing lukewarm water for at least 30 minutes. Do not rub area of contact. Seek immediate medical attention/advice. Wash contaminated clothing before reuse. Leather and shoes that have been contaminated with the solution may need to be destroyed.
Eye contact	Immediately flush eyes thoroughly with running water for at least 20 to 30 minutes. Seek immediate medical attention/advice.
Ingestion	Seek immediate medical attention/advice. Do not induce vomiting. Have victim rinse mouth with water, then give one to two glasses of water to drink. Never give anything by mouth to an unconscious person.

Most important symptoms/ effects (acute and delayed)

Symptoms	May cause severe eye irritation. Permanent eye damage including blindness could result. Symptoms may include redness, pain, tearing and conjunctivitis. May cause respiratory irritation.Symptoms include coughing, shortness of breath and wheezing. Ingestion can cause irritation and corrosive action in the mouth, stomach and digestive tract. Causes severe skin irritation. Symptoms may include redness, blistering, pain and swelling.

Indication of immediate medical attention, and special treatment if needed

Notes to Physician	Immediate medical attention is required.Causes chemical burns. Treat symptomatically.

Section 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Fires should be flooded with large amounts of water. Avoiding using other types of extinguishing materials, such as foam or dry chemicals.
Unsuitable extinguishing media	Do not use dry chemical extinguishing agents that contain ammonium compounds.

	Do not use a solid water stream as it may scatter and spread fire.
Special hazards arising from the substance or mixture / Conditions of flammability	Burning produces obnoxious and toxic fumes. Contact with most metals will generate flammable hydrogen gas. Contact with water will generate considerable heat.
Flammability classification (OSHA 29 CFR 1910.106)	Not flammable.
Hazardous combustion products	Sodium oxides. Oxygen; Hydrogen chloride;Chlorin
Special protective equipment and precautions for firefighters	**Protective equipment for fire-fighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. **Special fire-fighting procedures:** Fight fires from a safe distance. Evacuate personnel to safe areas. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. A full-body chemical resistant suit should be worn. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame.

Section 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up. Refer to protective measures listed in sections 7 and 8.
Methods and materials for containment and cleaning up	Ventilate area of release. Remove all sources of ignition. Stop leak if you can do so without risk. Dike for water control. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Do not use combustible absorbents, such as sawdust. Contact the proper local authorities.
Environmental precautions	Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. For large spills, dike the area to prevent spreading.
Special spill response procedures	If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8802). US CERCLA Reportable quantity (RQ):sodium hypochlorite (100 lbs / 45.4 kg)

Section 7. HANDLING AND STORAGE

Precautions for safe handling	Use only outdoors or in a well-ventilated area.Wear protective gloves/clothing and eye/face protection. Do not breathe mist or vapor. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Keep away from combustible material. Ground all equipment during handling.Never return contaminated material to its original container. Label containers appropriately.Wash thoroughly after handling. Keep containers closed when not in use. When preparing or diluting solution, always add to water, slowly and with stirring.

Conditions for safe storage, including any incompatibilities

Storage Conditions	Store in a cool, dry, well-ventilated area. Store away from incompatibles and out of direct sunlight. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking in the area. Store in corrosion-resistant containers.Do not store on wooden pallets. Protect from sunlight. Keep away from heat.
Incompatible materials	Strong oxidizing agents and acids.;Amines.; Ammonia ; Ammonium Salts; Reducing agents;Metals (e.g. Aluminum, brass, copper)

Section 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Control Parameters

Occupational exposure limits

Components	ACGIH TLV		OSHA PEL	
Sodium hypochlorite	TWA N/Av	STEL N/Av	PEL N/Av	STEL N/Av

LEGEND
ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety and Health Administration
NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

Ventilation and engineering measures	Provide exhaust ventilation or other engineering controls to keep the airborne concentration of vapours below their respective threshold limit value. Use explosion-proof equipment.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear eye/face protection. Chemical splash goggles are recommended.A full face shield may also be necessary.
Skin and body protection	Wear protective gloves/clothing. Impervious gloves must be worn when using this product. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Where contact is likely, wear chemical-resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield.
Respiratory protection	Respiratory protection is required if the concentrations exceed the TLV. Wear a positive-pressure supplied-air respirator. Advice should be sought from respiratory protection specialists. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4-02.
Other protective equipment	Full protective flameproof clothing. Wear chemically protective gloves (impervious), boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. An eyewash station and safety shower should be made available in the immediate working area. Other equipment may be required depending on workplace standards.
General Hygiene Measures	Do not breathe mist or vapor. Avoid contact with skin, eyes and clothing. Do not eat, drink, smoke or use cosmetics while working with this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance		**Upper/lower flammability or explosive limits**	
Colour	Colorless to light yellow	**Flammability limit - lower (%)**	Not applicable.
Physical State	Liquid	**Flammability limit – upper (%)**	Not applicable.
Odour	Chlorine or bleach odor.	**Vapor pressure**	17.5 mmHg@20^{o}C
Odour Threshold	Not available.	**Vapor density**	(Air = 1) 2.5 (Chlorine gas)
pH (concentrated product)	12+	**Relative density / Specific gravity**	1.08 g/cm3
Melting point/freezing point	-5^{o}C	**Solubility(ies)**	Soluble in water
		Other solubility(ies)	Not available.
Initial boiling point & boiling range	105^{o}C	**Partition coefficient (n-octanol/water)**	Not available.
Flash point	Not applicable.	**Auto-ignition temperature**	Not available.
Flashpoint (Method)	Not applicable.	**Decomposition temperature**	40^{o}C
Evaporation rate (BuAe = 1)	Not available.	**Viscosity**	Not available.
Flammability (solid, gas)	Not applicable.	**Volatiles (% by weight)**	Not available.
Flame projection length	Not applicable.	**Volatile organic Compounds (VOC's)**	Not available.
Oxidizing properties	Product may slowly decompose in sunlight, generating small amounts of oxygen	**Absolute pressure of container**	Not applicable.
Other physical/chemical comments	Molecular formula:NaOCl Molecular Weight: 74.4	**Explosive properties**	May be reactive and decompose violently.

Section 10. STABILITY AND REACTIVITY

Reactive Hazard	May be corrosive to metals. Contact with metals may release small amounts of flammable hydrogen gas.Reacts with amines and ammonia compounds to form explosively unstable compounds.
Chemical stability	Material is hygroscopic and may absorb moisture from air. May slowly decompose in air to form hazardous decomposition products. This process may be sped up by direct sunlight, heat and moisture.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat and open flame. Ensure adequate ventilation, especially in confined areas. Avoid contact with incompatible materials. Keep out of direct sunlight. Keep away from combustible material.
Incompatible materials	Strong oxidizing agents and acids; Amines.; Ammonia ; Ammonium Salts; Reducing agents; Metals (e.g. Aluminum, brass, copper)
Hazardous decomposition products	None known, refer to hazardous combustion products in Section 5.

Section 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Routes of entry inhalation	YES
Routes of entry skin & eye	YES
Routes of exposure skin absorption	NO
Routes of entry Ingestion	YES

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation	If product is heated or mists are formed, inhalation may cause irritation to the nose, throat and respiratory tract.
	Symptoms may include coughing, choking and wheezing. Inhalation of extremely high concentrations could cause pulmonary edema (fluid accumulation).
	Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed.
Sign and symptoms ingestion	May cause severe irritation and corrosive damage in the mouth, throat and stomach.
	Symptoms may include abdominal pain, nausea, vomiting, diarrhea and collapse.
Sign and symptoms skin	Causes skin burns.
	Symptoms may include redness, blistering, pain and swelling.
Sign and symptoms eyes	Causes serious eye damage.
	Symptoms may include severe pain, tearing, redness, swelling and blurred vision.
	Permanent eye damage including blindness could result.

Component Information

Component	LD50 Oral (Rat)	LD50 Dermal (Rabbit)	LC50 Inhalation (Rat) (4HR)
Sodium hypochlorite 7681-52-9	8800 mg/kg (12.5%); 5800 mg/kg (mouse)	>20 g/kg (12.5%)	>5250 mg/m³ (>5.25 mg/L)

Other important toxicological hazards : None known or reported by the manufacturer.

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

Potential Chronic Health Effects	None known or reported by the manufacturer
Sensitization to material	Not expected to be a skin or respiratory sensitizer.
Reproductive effects & Teratogenicity	Not expected to have other reproductive effects.
Mutagenic Effects	Not expected to be mutagenic in humans.
Specific target organ effects	Eyes, skin, respiratory system and digestive system. This material is not classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification: Specific Target Organ Toxicity, Single Exposure -Category 3 (respiratory) May cause respiratory irritation.
Medical conditions aggravated by overexposure	Pre-existing skin, eye and respiratory disorders.
Synergistic materials	Not available.

	There is no data available for this product.
Toxicological data	See below for individual ingredient acute toxicity data.
Carcinogenicity	No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

Section 12. ECOLOGICAL INFORMATION

Ecotoxicity	Very toxic to aquatic life with long lasting effects. Do not allow material to contaminate ground water system. See the following tables for the substance's ecotoxicity data.
Mobility in soil	No data is available on the product itself.
Persistence and degradability	Biodegradation is not applicable to inorganic materials.

Ecotoxicity data:

Ingredients	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Sodium hypochlorite	7681-52-9	0.059 mg/L (Rainbow trout)	0.04 mg/L (Tidewater silverside)	10

Ingredients	CAS No	Toxicity to Daphnia		
		EC50 / 96h	NOEC / 21 day	M Factor
Sodium hypochlorite	7681-52-9	0.032 mg/L Water flea	0.02 mg/L (Mysid shrimp)	10

Ingredients	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Sodium hypochlorite	7681-52-9	46 mg/L/96hr (Red algae)	No data available.	None.

Bioaccumulation / accumulation : No data is available on the product itself.

Components	Partition coefficient n-octanol/water (log Kow)	Bioconcentration factor (BCF)
Sodium hypochlorite (CAS 7681-52-9)	Not applicable.	Not applicable.

Other Adverse Environmental effects: No data is available on the product itself.

Section 13. DISPOSAL CONSIDERATIONS

Handling for Disposal	Handle waste according to recommendations in Section 7. Empty containers retain residue (liquid and/or vapour) and can be dangerous. Do not cut, weld, drill or grind on or near this container.
Methods of Disposal	Dispose in accordance with all applicable federal, state, provincial and local regulations.
RCRA	It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

Section 14. TRANSPORT INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
TDG	**UN1791**	**HYPOCHLORITE SOLUTION**	**8**	**II**	
TDG Additional information	May be shipped as LIMITED QUANTITY when transported in quantities no larger than 1 Litre, in packages not exceeding 30 kg gross mass.				
49CFR/DOT	UN1791	HYPOCHLORITE SOLUTION	8	II	

49CFR/DOT Additional information	May be shipped as LIMITED QUANTITY when transported in quantities no larger than 1 Litre, in packages not exceeding 30 kg gross mass.				
ICAO/IATA	UN1791	HYPOCHLORITE SOLUTION	8	II	
ICAO/IATA Additional information	Refer to ICAO/IATA Packing Instruction				
IMDG	UN1791	HYPOCHLORITE SOLUTION	8	II	
IMDG Additional information	Consult the IMDG regulations for exceptions				

Special precautions for user: Appropriate advice on safety must accompany the package

Environmental hazards : This substance meets the criteria for an environmentally hazardous substance according to the IMDG Code. See ECOLOGICAL INFORMATION, Section 12.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:
This information is not available

Section 15. REGULATORY INFORMATION

US Federal Information:
Components listed below are present on the following U.S. Federal chemical lists:

Ingredients	CAS #	TSCA Inventory	CERCLA Reportable Quantity(RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
Sodium hypochlorite	7681-52-9	Yes	100 lb/ 45.4 kg	Not available.	No	Not Applicable

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes: Immediate (Acute) health hazard ; Reactive hazard . Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals

US State Right to Know Laws:
The following chemicals are specifically listed by individual States:

Ingredients	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Sodium hypochlorite	7681-52-9	No	N/AP	Yes	Yes	Yes	Yes	Yes	No

Canadian Information:
Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL). Canadian WHMIS Classification: Refer to Section 2 for a WHMIS Classification for this product.

International Information:
Components listed below are present on the following International Inventory list:

Ingredients	CAS #Ingredients	European EINECs	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	NewZealand IOC
Sodium hypochlorite	7681-52-9	231-668-3	Present	Present	(1)-237	KE-31506	Present	HSR003698

Section 16. OTHER INFORMATION
Including date of preparation or last revision

List of abbreviations

CAS: Chemical Abstract Service Registration Number
TSRN indicates a Trade Secret Registry Number is used in place of the CAS number.
ACGIH: American Conference of Governmental Industrial Hygienists
NOEL: No Observed Effect Level
STEL: Short Term Exposure Limit
LC50: Lethal Concentration, 50%
TWA: Time Weighted Average
BOD: Biochemical Oxygen Demand
COD: Chemical Oxygen Demand
TOC: Total Organic Carbon
IATA: International Air Transport Association
IMDG: International Maritime Dangerous Goods Code
TLV: Threshold Limit Value
LD50: Lethal Dose, 50%
NFPA: National Fire Protection Association

Revision Summary

This document has been prepared to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200, as well as the Canadian Hazardous Products Regulations (HPR) to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

References: No data available

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Legend:
NA - Not Applicable w/w - weight/weight
ND - Not Determined w/v - weight/volume
NV - Not Available v/v - volume/volume

Ref.: CT 2/21/2017 CLOROX SDS; K.R 04/19/2018

FOOTNOTES
This information is furnished without warranty, representation, or license of any kind, except that it is accurate to the best of Bryce Laboratories knowledge or obtained from sources believed by Bryce Laboratories to be accurate. Bryce Laboratories does not assume any legal responsibility for use or reliance upon same. Customers are encouraged to conduct their own tests. Before using any product, read its label.

END OF SDS