

Safety Data Sheet

Safety Data Sheet (in compliance with Regulation (EC) 1907/2006, Regulation (EC) 1272/2008 and Regulation (EC) 453/2010)

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1. PRODUCT IDENTIFICATION

Trade Name (as labeled):	Sodium Hypochlorite Solution 6%
Chemical Name/Classification:	Mixture
Product Identifier (Part/Item Number):	11507
U.N. Number:	UN1791
U.N. Dangerous Goods Classification:	8, PG III
Recommended Use:	Used for irrigation of root canals
Restrictions on Use:	For professional use only
Manufacturer/Supplier Name:	Sultan Healthcare
Manufacturer/Supplier Address:	1301 Smile Way York, PA 17404
Manufacturer/Supplier Telephone Number:	800-989-8826 or 717-767-8502 (Product Information)
Transportation Emergency Contact Number:	800-424-9300 Chemtrec
E-Mail Address:	ProfessionalMSDS@dentsply.com

2. HAZARD(s) IDENTIFICATION

EU Classification (1999/45/EC as amended): Xi, R31, R36/37/38

EU Labeling:

<p>Irritant</p> 	<p>Contains Sodium Hypochlorite R31 Contact with acids liberates toxic gas. R36/37/38 Irritating to eyes, respiratory system, and skin S1/2 Keep locked up and out of the reach of children. S28 After contact with skin, wash immediately with plenty of water. S45 In case of accident or if you feel unwell, seek medical advice immediately. S50 Do not mix with ammonia, hydrocarbons, acids, alcohols, or ethers.</p>
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US Hazard Classification: Hazardous

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Hazardous Components	C.A.S. # EC#	IUPAC Name	Substance Classification	WT %
Sodium Hypochlorite	7681-52-9 / 231-668-3	Sodium Hypochlorite	C, N, R31, R34, R50 Skin Corr. 1 (H314), Aquatic Acute 1 (H400) EUH 31	6

Refer to Section 16 for the full text of the EU Classifications and R Phrases.

4. FIRST-AID MEASURES

Routes of Exposure	First Aid Instructions
Eye	Immediately flush eyes with large quantities of water for at least 15 minutes, holding the eyelids apart. Get medical attention if irritation persists.
Skin	Flush thoroughly with water for several minutes. Get medical attention if irritation persists.
Inhalation	Remove victim to fresh air. If breathing is difficult or irritation persists, get immediate medical attention.
Ingestion	Do not induce vomiting. Rinse mouth with water and give one glass of water to drink. Never give anything by mouth to an unconscious or convulsing person. Get immediate medical attention
Most Important Symptoms of Exposure	May cause eye and skin irritation. Inhalation of vapor or mists may cause respiratory irritation.
Other	None known.
Note to Physicians (Treatment, Testing and Monitoring): Treatment of overexposure should be directed at the control of symptoms and clinical conditions.	

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:	Use media appropriate for surrounding fire.		
Fire Fighting Procedures:	Cool fire exposed containers and structures with water.		
Specific Hazards Arising from the Chemical:	Decomposes when heated. Decomposition products may cause containers to rupture or explode.		
Precautions for Fire Fighters:	Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for all fires involving chemicals.		
Recommended Protective Equipment for Fire Fighters:			
EYES/FACE	SKIN	RESPIRATORY	THERMAL
			

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, PPE and Emergency Procedures: Keep unprotected people away from spill area. Wear appropriate protective clothing; gloves and eye protection.

Environmental Precautions: Do not allow spill to enter sewers and water courses. Report releases as required by local and federal authorities.

Methods and Materials for Containment and Clean-up: Wipe up or absorb with an inert absorbent. Place in container for disposal.

Recommended Personal Protective Equipment for Containment and Clean-up:

EYES/FACE	SKIN	RESPIRATORY	THERMAL
			

7. HANDLING AND STORAGE

Precautions for Safe Handling: Avoid contact with the eyes, skin and clothing. Avoid breathing vapors or mists. If containers are exposed to heat, vent them before use. Wear protective clothing and equipment. Use with adequate ventilation. Wash thoroughly with soap and water after handling. Keep containers closed when not in use.

Conditions for Safe Storage: Store in a cool, dry, well-ventilated area away from incompatible materials. Protect from physical damage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits:

Sodium Hypochlorite	United States	2 mg/m ³ AIHA WEELs STEL 1.5 mg/m ³ TWA ACGIH TLV; 2.9 mg/m ³ STEL (As Chlorine) 3 mg/m ³ CEIL OSHA PEL (As Chlorine)
	Germany	1.5 mg/m ³ STEL DFG MAK (As Chlorine)
	United Kingdom	1.5 mg/m ³ STEL UK OEL (As Chlorine)
	France	1.5 mg/m ³ STEL INRS VLCT (As Chlorine)
	Spain	1.5 mg/m ³ STEL VLA-ED (As Chlorine)
	Italy	1.5 mg/m ³ STEL OEL (As Chlorine)
	European Union	1.5 mg/m ³ STEL EU OEL (As Chlorine)

Biological Exposure Limits: None Established

Appropriate Engineering Controls: Use with adequate general or local exhaust ventilation to maintain exposure levels below the occupational exposure limits.

Individual Protection Measures (PPE)

Specific Eye/Face Protection: Chemical safety goggles recommended.

Specific Skin Protection: Wear impervious gloves such as rubber or neoprene.

Specific Respiratory Protection: Not normally required. In operations where exposure levels are exceeded, an approved respirator with acid gas cartridges or supplied air respirator appropriate for the form and concentration of the contaminants should be used. Selection and use of respiratory equipment must be in accordance with applicable regulations and good industrial hygiene practice.

Specific Thermal Hazards: Not applicable

Recommended Personal Protective Equipment:

EYES/FACE	SKIN	RESPIRATORY	THERMAL
			

Environmental Exposure Controls: None required for normal use.

General Hygiene Considerations and Work Practices: Avoid contact with the eyes, skin and clothing. Avoid breathing mists. Wash thoroughly with soap and water after handling.

Protective Measures During Repair and Maintenance of Contaminated Equipment: Wear protective clothing and equipment as described in Section 8. Wash thoroughly with soap and water after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colorless to light yellow liquid	Explosive Limits:	Not applicable
Odor:	Chlorine	Vapor Pressure:	23
Odor Threshold:	No data available	Vapor Density:	Not applicable
pH:	11.5	Relative Density:	1.190 – 1.215
Melting/Freezing Point:	30.5°F (-0.83°C)	Solubility:	Miscible
Initial Boiling Point and Range:	220°F (104.4°C)	Partition Coefficient: n-octanol/water:	Not available
Flash Point:	Not flammable	Auto-Ignition Temperature:	Not applicable
Evaporation Rate:	Not applicable	Decomposition Temperature:	Not available

Flammability:	Not flammable	Viscosity:	Not applicable
Explosive Properties:	None	Oxidizing Properties:	Strong oxidizer

10. STABILITY AND REACTIVITY

Reactivity: Will not polymerize.
Chemical Stability: Stable.
Possibility of Hazardous Reactions: Reacts with acids.
Conditions to Avoid: Avoid exposure to heat, light, and contamination with acids or metals.
Incompatible materials: Reacts with acids. Do not mix or contaminate with ammonia, hydrocarbons, alcohols, or ethers.
Hazardous Decomposition Products: Produces oxygen, and chlorine when heated. Thermal decomposition produces acid fumes.

11. TOXICOLOGICAL INFORMATION

<u>Potential Health Effects:</u>
<u>Eyes:</u> May cause irritation with pain and tearing.
<u>Skin:</u> May cause skin irritation.
<u>Ingestion:</u> Swallowing may cause irritation to mouth and throat, vomiting, and diarrhea.
<u>Inhalation:</u> Inhalation of vapors or mists may cause irritation to the upper respiratory tract.
<u>Chronic Health Effects:</u> Prolonged contact with dilute solutions may cause dermatitis.
<u>Carcinogenicity:</u> None of the components is listed as a carcinogen by IARC, NTP, OSHA, ACGIH or the EU Substances Directive.
<u>Mutagenicity:</u> The cytotoxicity sodium hypochlorite, used in root canal therapy was tested in human fibroblast and lymphoblast cultures. The amount of cell damage was assessed by measuring the release of (51)chromium from labeled cells into the medium. The solution when applied at therapeutic concentrations, displayed high toxicity in vitro and differences in cytotoxicity were seen between different solution.
<u>Medical Conditions Aggravated by Exposure:</u> Employees with pre-existing eye and skin disorders may be at increased risk from exposure.
<u>Acute Toxicity Data:</u> Oral rat LD50 7,340 mg/kg
<u>Reproductive Toxicity Data:</u> No data available.
<u>Specific Target Organ Toxicity (STOT):</u>
<u>Single Exposure:</u> No data available.
<u>Repeated Exposure:</u> No data available.

12. ECOLOGICAL INFORMATION

Toxicity: Fish (clupea harengus) LC50 .033 - .097 mg/l 96h

Persistence and Degradability: Sodium hypochlorite is sensible to the light with decomposition in chlorate and chloride. Half life of 10-15% available chlorine solution will be reduced 3-4 times by sunlight.
Very unstable at pH under 11 with decomposition in chlorine. Not stable in water in the presence of organic material.

Bio-accumulative Potential: Sodium hypochlorite shows no bioaccumulation or food chain concentration toxicity potential.

Mobility in Soil: Not stable in soil in the presence of organic material.

Other Adverse Effects: The high pH of this product may cause adverse effects in aquatic systems, and eco-systems.

Results of PBT/vPvB Assessment: Not required.

13. DISPOSAL CONSIDERATIONS

Regulations: Dispose in accordance with local, state and federal environmental regulations

Properties (Physical/Chemical) Affecting Disposal: None known.

Waste Treatment Recommendations: Neutralize before discharge to sewer.

14. TRANSPORT INFORMATION

UN Number:	ADR/RID: UN1791	IMDG: UN1791	IATA: UN1791	DOT: UN1791
UN Proper Shipping Name:	ADR/RID: Hypochlorite Solution IMDG: Hypochlorite Solution IATA: Hypochlorite Solution DOT: Hypochlorite Solution			
Transport Hazard Class(es):	ADR/RID: 8	IMDG: 8	IATA: 8	DOT: 8
Packaging Group:	ADR/RID: III	IMDG: III	IATA: III	DOT: III
Environmental Hazards:	ADR/RID: No	IMDG Marine pollutant: No	IATA: No	DOT: No
Special Precautions for User: Not applicable				

15. REGULATORY INFORMATION

U.S. Federal Regulations

Comprehensive Environmental Response and Liability Act of 1980 (CERCLA): The RQ for the product, based on the RQ for Sodium Hypochlorite (6% maximum) of 100 lbs, is 1,666 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

Toxic Substances Control Act (TSCA): All of the ingredients in this product are listed on the EPA TSCA Inventory.

OSHA Hazard Classification: Irritant.

Clean Water Act (CWA): Sodium Hypochlorite listed.

Clean Air Act (CAA): Not Listed

Superfund Amendments and Reauthorization Act (SARA) Title III Information:

SARA Section 311/312 (40 CFR 370) Hazard Categories:

Immediate Hazard:	Yes	Pressure Hazard:	No
Delayed Hazard:	No	Reactivity Hazard:	No
Fire Hazard:	No		

This product contains the following toxic chemical(s) subject to reporting requirements of SARA Section 313 (40 CFR 372):

Components	C.A.S. #	WT %
None		

State Regulations

California: This product contains the following chemicals(s) known to the State of California to cause cancer, birth defects or reproductive harm:

Components	C.A.S. #	WT %
None		

International Regulations

EU REACH: The substances in this product comply with the EU REACH regulation as applicable.

16. OTHER INFORMATION

Full Text of Classification Abbreviations used in Sections 2 and 3:

C	Corrosive.
N	Dangerous for the environment.
R31	Contact with acids liberates toxic gas.
R34	Causes burns.
R50	Very toxic to aquatic organisms.
Eye Dam 1	Eye Damage Category 1.
Skin Corr. 1	Skin corrosion Category 1.
Aquatic Acute 1	Aquatic Acute Toxicity Category 1.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.

Date of SDS Preparation/Revision: 28 June 2012

Revision Summary: Revision 4 – Periodic review. Changes made to address and contact information and updated irritant symbol to GHS image.

Data Sources: US NLM ChemID Plus and HSDB, Substance SDS for components, IUCLID Dataset EU Chemical Bureau, ESIS, Country websites for occupational exposure limits.