

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: SH-10

Product Number: 2691 and other versions of 2691

Distributor: Arcot Manufacturing Corporation, 2950 Mowery Road, Houston, Texas, U.S.A. 77045

Emergency Response Telephone: 1-800-633-8253 (Account #9390)

Arcot Customer Service Telephone: 713-413-9700

Website: www.ArcotManufacturing.com

Recommended Use: Cleaning agent for cleaning, bleaching and water treatment

Restrictions On Use: Do not mix with other chemicals.

2. HAZARDS IDENTIFICATION

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS):

Physical Hazards:

Oxidizing liquids (Category 2)

Corrosive to metals (Category 1)

Health Hazards:

Skin corrosion/irritation (Category 1)

Serious eye damage/eye irritation (Category 1)

Environmental hazards:

Hazardous to the aquatic environment, acute hazard (Category 1)

Hazardous to the aquatic environment, long-term hazard (Category 1)

Signal Word: **DANGER**



Hazard Statement: May intensify fire; oxidizer. May be corrosive to metals. Causes severe skin burns and eye damage. Causes serious eye damage. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

Precautionary statements:

Prevention: Keep away from heat. Keep only in original container. Do not breathe mist or vapor. Wash thoroughly after handling. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

Response: If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.

Storage: Store away from incompatible materials. Store in a well-ventilated place. Keep container tightly closed. Store in accordance with local/regional/national/international regulations.

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazards not otherwise classified (HNOC): None known.

Supplemental information: None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS #	Concentration
Sodium Hypochlorite	7681-52-9	10-20%
Sodium Hydroxide	1310-73-2	2.5-10%
Other components below reportable levels		84.5%

4. FIRST-AID MEASURES

If inhaled: Move to fresh air. Call a physician if symptoms develop or persist.

In case of skin contact: IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

In case of eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

If swallowed: Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed: Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Indication of immediate medical attention and special treatment needed: Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

General Information: Take off all contaminated clothing immediately. Contact with combustible material may cause fire. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Powder. Foam. Carbon dioxide (CO2).

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical: Greatly increases the burning rate of combustible materials. Containers may explode when heated. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions: In case of fire and/or explosion do not breathe fumes. In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk.

Specific Methods: Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards: May intensify fire; oxidizer. Contact with combustible material may cause fire.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep away from clothing and other combustible materials. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleanup procedures:

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Ventilate the contaminated area. This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Absorb spillage to prevent material damage. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Wear appropriate protective equipment and clothing during clean-up.

Environmental precautions: Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

7. HANDLING AND STORAGE

Precautions for safe handling: Keep away from heat. Keep away from clothing and other combustible materials. Take any precaution to avoid mixing with combustibles. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear

appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities: Store locked up. Keep away from heat. Store in a cool, dry place out of direct sunlight. Store in corrosive resistant container with a resistant inner liner. Keep only in the original container. Store in a well-ventilated place. Do not store near combustible materials. Store away from incompatible materials (see Section 10 of the SDS).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

Components	U.S. OSHA PEL, TWA	U.S. ACGIH TLV Ceiling, TWA	U.S. NIOSH Ceiling, TWA
Sodium hydroxide (CAS 1310-73-2)	2 mg/m ³	2 mg/m ³	2 mg/m ³

Components	U.S. AIHA Workplace Environmental Exposure Level (WEEL) Guides, STEL
Sodium Hypochlorite (CAS 7681-52-9)	2 mg/m ³

Biological limit values: No biological exposure limits noted for the ingredients.

Appropriate engineering controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product. It is recommended that users of this product perform a risk assessment to determine the appropriate Personal Protective Equipment (PPE).

Individual protection measures, such as personal protective equipment:

Eye/face protection: Wear chemical goggles and face shield. Do not get in eyes. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin protection / Hand protection: Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Wear appropriate chemical resistant clothing.

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards: Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations: Keep from contact with clothing and other combustible materials. Remove and wash contaminated clothing promptly. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Form: liquid Color: clear colorless to pale yellow
Odor	Chlorine
Odor Threshold	Not available.
pH	Not available.
pH in aqueous solution	12-14 (1% in DI water)
Melting point/Freezing point	approximately 3°F (-16°C)
Initial boiling point	< 230°F (< 110°C)
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	Not available.
Vapor pressure	approximately 12mm Hg @25°C
Vapor density	Not available.
Relative density	Not available.
Specific gravity	1.3 @25°C
Water solubility	soluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

10. STABILITY AND REACTIVITY

Reactivity: Greatly increases the burning rate of combustible materials. Reacts violently with strong acids. This product may react with oxidizing agents. May be corrosive to metals.

Chemical stability: Material is stable under recommended storage conditions.

Possibility of hazardous reactions: Reacts violently with strong acids. This product may react with oxidizing agents. Hazardous polymerization does not occur.

Conditions to avoid: Heat. Do not mix with other chemicals. Contact with incompatible materials.

Incompatible materials: Strong acids. Acids. Strong oxidizing agents. Oxidizing agents. Combustible material. Reducing agents. Metals. Bases, alkalis (organic).

Hazardous decomposition products: Chlorine. Hydrogen chloride.

11. TOXICOLOGICAL INFORMATION

Likely routes of exposure:

Inhalation: May cause irritation to the respiratory system. Prolonged inhalation may be harmful.

Skin contact: Causes severe skin burns.

Eye contact: Causes serious eye damage.

Ingestion: Causes digestive tract burns.

Symptoms related to the physical, chemical and toxicological characteristics:

Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Information on toxicological effects: Acute toxicity.

Components	Species	Test Results
Sodium Hypochlorite 12.5% Acute, Oral, LD50	Mouse	46400 mg/kg estimated
	Rat	71 g/Kg estimated
Sodium Hypochlorite (CAS 7681-52-9) Acute, Oral, LD50	Mouse	5800 mg/Kg
	Rat	8.91 g/Kg

Skin corrosion/irritation: Causes severe skin burns and eye damage.

Serious eye damage/eye irritation: Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization: Not a respiratory sensitizer.

Skin sensitization: This product is not expected to cause skin sensitization.

Germ cell mutagenicity: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity: This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Reproductive toxicity: This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure: Not classified.

Specific target organ toxicity - repeated exposure: Not classified.

Aspiration hazard: Not an aspiration hazard.

Chronic effects: Prolonged inhalation may be harmful.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Very toxic to aquatic life with long lasting effects.

Components	Species	Test Results
Sodium Hypochlorite 12.5% EC50	Nitocra Spinipes Fasciatus	40 mg/L, 96 hours
	Gammarus Fasciatus	4 mg/L, 96 hours
Aquatic Crustacea, EC50	Daphnia	1153 mg/L, 48 hours estimated
	Daphnia magna	0.07-0.7 mg/L, 24 hours
	Ceriodaphnia sp.	0.006 mg/L, 24 hours
Fish, LC50	Fish	12.4899 mg/L, 96 hours
Sodium Hydroxide (CAS 1310-73-2) Aquatic Crustacea, EC50	Water flea (Ceriodaphnia dubia)	34.59-47.13 mg/L, 48 hours
Fish, LC50	Western mosquitofish (Gambusia affinis)	125 mg/L, 96 hours
Sodium Hypochlorite (CAS 7681-52-9) Aquatic Fish, LC50	Chinook salmon (Oncorhynchus tshawytscha)	0.038-0.065 mg/L, 96 hours

Persistence and degradability: No data available.

Bioaccumulative potential: No data available.

Mobility in soil: No data available.

Other adverse effects: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. DISPOSAL CONSIDERATIONS

Disposal Instructions: Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local, regional, national and international regulations.

Hazardous waste code: D002: Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel]
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products: Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging: Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

U.S. DOT and UN proper description: UN1760, Corrosive liquids, n.o.s. (contains Hypochlorite solutions), 8, PGIII.

Reportable Quantity (RQ): 100 Lb.

Poison Inhalation Hazard: No

Ground transport only. Do not ship via air.

Read safety instructions, SDS and emergency procedures before handling.

15. REGULATORY INFORMATION

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D): Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4):

Sodium hydroxide (CAS 1310-73-2) is listed.

Sodium hypochlorite (CAS 7681-52-9) is listed.

SARA 304 Emergency release notification: Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA):

Hazard categories: Immediate Hazard - Yes

Delayed Hazard - No

Fire Hazard - Yes

Pressure Hazard - No

Reactivity Hazard - No

SARA 302 Components (Extremely Hazardous Substances): Not listed.

SARA 311/312 Hazard chemical: Yes

SARA 313 (TRI reporting): Not regulated.

Other federal regulations:

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List: Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130): Not regulated.

Safe Drinking Water Act (SDWA): Not regulated.

FIFRA Information: If this chemical is marketed as a pesticide product, it must be registered with the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The pesticide label also includes other important information, including directions for use.

16. OTHER INFORMATION

HMIS Ratings: Health = 3 Flammability = 0 Physical hazard = 2

NFPA Ratings: Health = 3 Flammability = 0 Instability = 1 Special hazards = OX (oxidizer)

HMIS & NFPA ratings involve data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this SDS must be considered.

Abbreviations:

ACGIH = American Conference of Governmental Industrial Hygienists

CAS = Chemical Abstract Service

EC50 = half maximal effective concentration (refers to the concentration of the chemical which induces a response halfway between the baseline and maximum after a specified exposure time)

GHS = Globally Harmonized System

HCS = Hazard Communication Standard

LC = Lethal Concentration (of a chemical in air or in water)

NIOSH = National Institute for Occupational Safety & Health

PEL = Permissible Exposure Limit

PPE = Personal Protective Equipment

STEL = Short Term Exposure Limit

TLV = Threshold Limit Values

TWA = Time Weighted Average limit or ceilings (C) (exposure limit)

DISCLAIMER: The information contained herein is based upon data obtained from sources believed to be reliable and reflects our best professional judgment. Since it is impossible to anticipate all of the conditions under which our products may be used, we do not guarantee that the recommendations will be adequate for all individuals and situations. Each user of this product should determine the suitability of the product for his or her particular purpose and should comply with all federal, state and local regulations. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. We shall not be held liable for any damage resulting from handling or from contact with the above product or from improper use of our products. We do not provide any warranties, expressed or implied, and do not assume any responsibility for the accuracy or completeness of the data contained herein. This information is offered for your information, consideration, and investigation. You should satisfy yourself that you have all current data relevant to your particular use. We update SDS and labels on a regular basis. Please do not hesitate to contact us for current information.

Revision Date: November 27, 2015