Table of Contents

Non-Congregate Feeding During School Closure
Drive up Service (SOP #1).......................................................... Page 3 - 7
Washing Hands (SOP #2) ............................................................... Page 8 - 10
Personal Hygiene (SOP#3) ............................................................. Page 11 - 12
Holding Hot and Cold Potentially
Hazardous Foods (SOP#4) ............................................................. Page 13 - 15
Using Time Alone as a Public Health Control to
Limit Bacteria (SOP#5) ................................................................. Page 16 - 17
Disinfectant Bleach Solution Formula (SOP#6) ......................... Page 18 - 19
HACCP Documentation Forms ................................................ Appendix
When and How to Wash Your Hands .................................. Appendix
Mixing of Chlorine (Bleach) Solution for Disinfecting......... Appendix
Prime Source, Bleach Safety Data Sheet............................... Appendix
HACCP Standard Operating Procedure #1

Non-Congregate Feeding During School Closures – Drive-Up Service

Purpose: To prevent foodborne illness by ensuring that all foods are handled correctly and held at the appropriate internal temperature until time to pack for service. After packing to ensure that food is placed back into appropriate equipment for holding until either served or delivered.

Scope: This procedure will present the “Drive Up” scenario. These procedures apply to Food & Nutrition Services employees and to any non-food service staff who may either be serving or delivering food.

Instructions:

All employees must:

1. Follow all hand washing and personal hygiene standard operating procedures. Reference: Washing Hands and Personal Hygiene SOP’s.
2. Use gloves for handling all ready-to-eat foods.
3. Prepare and store all foods according to standard operating procedures for holding hot or cold foods. Reference: Holding or Cold Potentially Hazardous Foods SOP

Note: The above instructions are ALL critical control points in keeping food safe during preparation and holding of all foods however during any type of infectious disease outbreak proper personal hygiene and using gloves becomes even more important.

Time as Control: In the case of non-congregate feeding “Time as a Control” will be implemented. There should be no leftover food items
kept at the end of service. The only exception is “Shelf Stable” items that can be saved and returned to inventory at any time.

Reference: Using Time Alone as a Public Health Control to Limit Bacteria Growth in Potentially Hazardous Foods SOP.

Recordkeeping: This is an essential step to ensure and monitor food safety at all COVID-19 Meal Service Centers. All paperwork should be saved for one year on file at the Food & Nutrition Services Central Office.
HACCP Standard Operating Procedure #1

Non-Congregate Feeding During School Closures – Drive-Up Service, Continued

Before taking meals to the designated drive-up location:

1. Be sure that all service equipment (such as carts, coolers, insulated bags, hot boxes, etc.) have been cleaned and sanitized with properly mixed disinfectant solutions and are clean in appearance.
2. Before handling service containers, beverages, and utensils, wash your hands thoroughly and put on food service gloves to avoid any contamination.
3. When placing milk in containers best practice is to layer ice packs to keep milk at proper holding temperature. Remove milk from refrigerated storage as needed to Drive-Up Meal Service location.
4. Load carts, coolers, and utensils with extra food service gloves.
5. Transport food to the designated Drive Up Meal Location.

Note: Transport food to the Drive-Up Meal Service location in batches so food may be held at proper temperature for as long as possible. Keep food at proper temperature.

At the Drive-Up Meal Service location:

1. Check to be sure all carts are stable to avoid any unexpected movement such as rolling away.
2. Always use food service gloves and if gloves are torn or dirty, remove carefully to avoid contamination and replace with fresh pair of gloves. If glove comes in contact with co-worker or customer, remove glove carefully and replace with fresh glove.
3. Food & Nutrition Services staff will place meals in a dish box (Bus Tub) on a foodservice cart located at the curb of each Meal Service location. There will be (4) four stations at each Meal Service Center location. Parents will be required to get out of their vehicle, pickup the needed amount of meals, return to their vehicle, and exit the Meal Service Center location.

4. Mt. Diablo Unified School District employees will no longer be handing out meals into family vehicles or in direct contact with parents or children receiving meals.

At the end of Meal Service:

1. Take all food service equipment back to the kitchen.
2. Discard all unused food, no leftover food allowed to be served the next day from Drive-Up Meal Service location.
3. Wash, rinse, and sanitize all food service equipment used. Items such as coolers, hot boxes and carts should be thoroughly wiped down with detergent and hot water, rinsed using clear water and then sprayed with proper disinfectant and allowed to air dry.
4. Handle removal of boxes and any trash wearing food service gloves and immediately wash hands as a best practice.
5. Wash hands at the end of day thoroughly and travel directly home, if possible.

Instructions:

The Food & Nutrition Services Area Supervisor will:
1. Observe all Food & Nutrition Services employees to ensure they are following all applicable standard operating procedures as outlined.
2. Inspect and ensure staff are properly trained for cleaning all service equipment.
3. Follow up as necessary.

**Monitoring:**

1. Routinely ensure a clean, sanitized, and properly calibrated thermometer to ensure all food is prepared and held at proper temperature correctly before service.
2. Routinely check all holding equipment temperatures to ensure food is being held correctly before service.
3. Monitor and log temperatures.
4. Take corrective action as necessary.
5. Follow up as needed.
6. File HACCP logs at Food & Nutrition Services Central Office.

**Corrective Action:**

1. Area Supervisor or their designee will retrain Food & Nutrition Services staff found not following the procedures in this SOP.
2. Discard food found to be in the temperature danger zone for more than 1 hour.
HACCP Standard Operating Procedure #2

Hand Washing

Purpose: To prevent foodborne illness by contaminated hands.

Scope: This procedure applies to all who handle, prepare, and serve food.

Instructions:

1. Train all Food & Nutrition Services employees and non-food service staff on using the procedure in this SOP.
2. Follow State and local health department requirements.
3. Post handwashing signs or posters in language that can be understood by all Food & Nutrition Services staff and non-food service staff near all handwashing sinks, in food preparation areas, and restrooms.
4. Use designated handwashing sinks for handwashing only. Do not use food preparation, utility, and dishwashing sinks for handwashing.
5. Provide warm running water, soap, and a means to dry hands. Provide a waste container at each handwashing sink area.
6. Keep handwashing sinks accessible anytime all employees are present.
7. Wash hands:
   • Before starting work
   • During food preparation
   • When moving from one food preparation area to another
   • Before putting on or changing gloves
   • After using the restroom
   • After sneezing, coughing, or using a tissue
   • After touching hair, face, or body
• After eating, drinking, or chewing gum or smoking
• After handling raw meats, poultry, or fish
• After wiping down food service equipment
• After handling any type of trash including recyclable boxes
• After handling money
• After any time, the hands may become contaminated

8. Follow proper handwashing procedures as indicated below:
   • Wet hands and forearms with warm running water at least 100 degrees and apply soap
   • Scrub lathered hands and forearms, under fingernails, and between fingers for at least 10-15 seconds. Rinse thoroughly under warm running water for 5-10 seconds
   • Dry hands and forearms thoroughly with single-use paper towels
   • Dry hands for at least 30 seconds if using warm air hand dryer
   • Turn off water using paper towels
   • Use paper towel to open door when exiting the restroom

9. Follow FDA recommendations when using hand sanitizers. These recommendations are as follows:
   • Use hand sanitizers only after hands have been properly washed and dried
   • Use only hand sanitizers that comply with the 2001 Food Code
   • Use hand sanitizers in the manner specified by the manufacturer
Monitoring:

1. A Food & Nutrition Services Area Supervisor or designee will visually observe the handwashing practices of foodservice staff during all hours of operation.
2. The Food & Nutrition Services Area Supervisor or designee will visually observe the handwashing sinks are properly supplied during all hours of operation.

Corrective Action:

1. Retrain any Food & Nutrition Services employee or non-foodservice employee found not following the procedures in this SOP.
2. Ask any employee, who is observed not washing their hands at the appropriate times or not using the proper procedure, to wash their hands immediately.
3. Retrain all employees to ensure proper handwashing procedure.
HACCP Standard Operating Procedure #3

Personal Hygiene

**Purpose:** To prevent contamination of food by Food & Nutrition Services staff or non-foodservice employees.

**Scope:** This procedure applies to all who handle, prepare, and serve food.

**Instructions:**

1. Train Food & Nutrition Services staff and non-foodservice staff on using the procedures in this SOP.
2. Follow State or local health department requirements.
3. All employees report to work in good health, clean, and dressed in clean attire.
4. Change apron when it becomes soiled.
5. Wash hands properly, frequently, and at the appropriate times.
6. Keep fingernails trimmed, filed, and maintained so that nail edges are cleanable and not rough.
7. Avoid wearing artificial fingernails and fingernail polish.
8. Wear single-use gloves.
9. Do not wear any jewelry except for a plain ring such as a wedding band.
10. Treat and bandage wounds and sores immediately. When hands are bandaged, single-use gloves must be worn.
11. Cover a lesion containing pus with a bandage. If the lesion is on a hand or wrist, cover with an impermeable cover such as a finger cot or stall and a single-use glove.
12. Eat, drink, or chew gum only in designated break areas where food or food contact surfaces may not be contaminated.
Monitoring:

- A Food Nutrition Services Area Supervisor or designee will inspect employees when they report to work to be sure that each employee is following this SOP.
- The designated Food & Nutrition Services staff member will monitor that all employees are adhering to the personal hygiene procedure during all hours of operation.

Corrective Action:

1. Retrain any Food & Nutrition Services or non-foodservice employee found not following the procedures in this SOP.
2. Discard affected food.
HACCP Standard Operating Procedure #4

Holding Hot and Cold Potentially Hazardous Foods

**Purpose:** To prevent foodborne illness by ensuring that all potentially hazardous foods are held under the proper temperature.

**Scope:** This procedure applies to Food & Nutrition Services staff and non-foodservice employees who prepare or serve food.

**Instructions:**

1. Train Food & Nutrition Services staff and non-foodservice staff on using the procedures in this SOP.
2. Follow State or local health department requirements.
3. If State or local health departments requirements are based on the 2001 FDA Food Code:
   - Hold Hot Foods at 135 degrees or above
   - Hold Cold Foods at 41 degrees or below
4. Preheat Hot Boxes of Food Warmers

**Monitoring:**

1. Use a clean, sanitized, and calibrated probe or thermometer and/or digital probe to measure the temperature of the food.
2. For hot foods held for service:
   - Reheat foods in accordance with the Reheating for Hot Holding SOP, in accordance to Mt. Diablo Unified School District HACCP Plan.
   - All hot potentially hazardous foods should be 135 degree or above before placing the food out for display or service.
   - Take the internal temperature of food before placing in a hot holding unit and at least every 2 hours thereafter.
3. For cold foods held for service:
   - Chill foods, if applicable, in accordance with the Cooling Potentially Hazardous Foods SOP, in accordance to Mt. Diablo Unified School District HACCP Plan.
   - All cold food potentially hazardous foods should be 41 degrees or lower before placing the food our for display or service.
   - Take the internal temperature of the food before placing it onto any cold serving line and at least every 2 hours thereafter.

4. For cold foods in storage:
   - Chill Foods in accordance with the Cooling Potentially Hazardous Foods SOP, in accordance to Mt. Diablo Unified School District HACCP Plan.

Corrective Action:

1. Retrain any Food & Nutrition Services or non-foodservice staff found not following the procedures in this SOP.
2. For hot foods:
   - Reheat the food to 165 degrees for 15 seconds if the temperature is found to be below 135 degrees.
   - Ensure all hot food holding equipment is a minimum of 135 degrees.
   - Discard the food if it cannot be determined how long the food temperature was below 135 degrees.
3. For cold foods:
   Rapidly chill the food using an appropriate cooling method if the temperature is found to be above 41 degrees and the last measurement was 41 degrees or below taken within the last two hours.
4. Discard the food if it cannot be determined how long the food temperature was above 41 degrees.
HACCP Standard Operating Procedure #5

Using Time Alone as a Public Health Control to Limit Bacteria Growth in Potentially Hazardous Foods

Purpose: To prevent foodborne illness by ensuring that potentially hazardous foods are not held in the temperature danger zone for more than 4 hours before being cooked or served.

Scope: This procedure applies to Food & Nutrition Services staff and non-foodservice employees that handle, prepare, cook, and serve food.

Criteria For Using Time as a Control:

- The food must be cooked and/or served or discarded within the four hours.
- Food that is designated being under “Time as a Control” must be discarded. No exceptions.

Instructions:

1. Train Food & Nutrition Services staff and non-foodservice employees on using this procedure in this SOP.
2. Follow State and local health department requirements.
3. Recordkeeping for foods that are past the point of 4 hours when the foods are removed from the temperature control, such as an oven or refrigerator.
4. Discard food when food is in the danger zone for greater than 4 hours.

Monitoring:

1. Food & Nutrition Services staff will log the time when food is 4 hours past the point when the food is removed from proper temperature control.
2. Food & Nutrition Services and non-foodservice staff will continually monitor that foods are cooked, served, or discarded by the indicated time.

**Corrective Action:**

1. Retrain any Food & Nutrition and non-foodservice staff found not following the procedures in this SOP.
2. Discard food that is noted to exceed the 4-hour limit.
HACCP Standard Operating Procedure #6

Disinfectant Bleach Solution Formula

**Purpose:** To prevent foodborne illness by work surfaces and food service equipment.

**Scope:** This procedure applies to all who handle, prepare, and serve food.

**Instructions:**

1. Observe all Food & Nutrition Services employees to ensure they are following all applicable standard operating procedures as outlined.
2. Inspect and ensure staff are properly trained for cleaning all service equipment.
3. Wash, rinse, and sanitize all food service equipment used. Items such as coolers, hot boxes and carts should be thoroughly wiped down with detergent and hot water, rinsed using clear water and then sprayed with proper disinfectant and allowed to air dry.
4. A bleach and water solution should be mixed daily to preserve its strength.
5. Cleaning must be done prior to disinfecting.
6. Leave the disinfectant solution on the surface for a minimum of one minute.
The Formula

*Intermediate – High Level of Disinfection* – (approximately 1000 ppm)

- 20 ml (4 teaspoons) household bleach or commercial + 1000 ml (4 cups) water = (1) 32 oz. Spray Bottle
- 40 ml (8 teaspoons) household bleach or commercial + 2000 ml (8 cups) water = (2) 32 oz. Spray Bottle

Recommended Uses:

- For use in washrooms, change tables in childcare, during outbreaks of respiratory diseases or vomiting and diarrhea
**HACCP-Based SOPs**

## Cooking and Reheating Temperature Log

**Instructions:** Record temperatures every hour during the cooling cycle. Record corrective actions, if applicable. If no foods are cooled on any working day, indicate “No Foods Cooled” in the Food Item column. The foodservice manager will verify that the foodservice staff is cooling food properly by visually monitoring foodservice employees during the shift and reviewing, initialing, and dating this log daily. Maintain this log for a minimum of 1 year.

<table>
<thead>
<tr>
<th>Date</th>
<th>Food Item</th>
<th>Time/Temp</th>
<th>Time/Temp</th>
<th>Time/Temp</th>
<th>Time/Temp</th>
<th>Time/Temp</th>
<th>Corrective Actions Taken</th>
<th>Initials</th>
<th>Verified By/Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
HACCP Cook and Cooling Temperature Log

Hazard Analysis and Critical Control Points (HACCP) is a preventive approach to assuring food safety

<table>
<thead>
<tr>
<th>Date</th>
<th>Food Item</th>
<th>Time/ Cook Temp</th>
<th>Time/ Cool Temp</th>
<th>Time/ Cool Temp</th>
<th>Time/ Cool Temp</th>
<th>Time/ Cool Temp</th>
<th>Time/ Cool Temp</th>
<th>Corrective Action taken? (If yes: specify what action taken)</th>
<th>Initials</th>
<th>Verified by/date</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXAMPLE</td>
<td>Chicken</td>
<td>10am 170</td>
<td>11am 100</td>
<td>12pm 69</td>
<td>1pm 60</td>
<td>2pm 50</td>
<td>3pm 45</td>
<td>4pm 38</td>
<td>NO</td>
<td>MC</td>
</tr>
</tbody>
</table>

**Instructions:** Record the final cook time and temperature. Record cooling time and temperatures hourly. Implement corrective actions if not meeting the critical limits - refer to the HACCP Plan Worksheet. Maintain records this chart for 1 year.
WHEN AND HOW TO WASH YOUR HANDS

You Should Wash Your Hands:
- Before you begin a task
- After you use the restroom
- Before and after you handle raw meat, poultry, and seafood
- After you touch your hair, face or body
- After you sneeze, cough, or use a tissue
- After you smoke, eat, drink or chew gum or tobacco
- After you use chemicals that might affect the safety of food
- After you take out the garbage
- After you clear tables or wash dirty dishes
- After you touch your clothes or apron
- After you handle money
- After you touch anything that may contaminate your hands

The whole process should take approximately 20 seconds.

1. Wet your hands with running water as hot as you can comfortably stand (at least 100°F/38°C).
2. Apply soap. Apply enough to build up a good lather.
3. Vigorously scrub hands and arms for at least 10 to 15 seconds. Clean under fingernails and between fingers.
4. Rinse hands and arms thoroughly under running water.
5. Dry hands and arms with a single-use paper towel or warm-air hand dryer. Use a paper towel to turn off the faucet. Do not use your apron or any part of your uniform. When leaving the restroom, use a paper towel to open the door.
Mixing of Chlorine (Bleach) Solution for Disinfecting

Important
- A bleach and water solution should be mixed daily to preserve its strength
- Leave the solution on the surface for a minimum of one minute
- Cleaning must be done prior to disinfecting

High level disinfection (approximately 5000 ppm)

Preparing a 1: 10 Household Bleach Solution:
- 62 ml (1/4 cup) household bleach + 562 ml (2 1/4 cups) water
- 250 ml (1 cup) household bleach + 2250 ml (9 cups) water

Recommended Uses:
- cleaning up a blood or body fluid spill
- when directed by public health
- for use on semi-critical medical and personal service instruments

Intermediate - High level disinfection (approximately 1000 ppm)

Preparing a 1: 50 Household Bleach Solution:
- 20 ml (4 teaspoons) household bleach + 1000 ml (4 cups) water
- 100 ml (7 tablespoons) household bleach + 5000 ml (20 cups) water

Recommended Uses:
- for use in washrooms, change tables in childcare, during outbreaks of respiratory diseases or vomiting and diarrhea

Intermediate level disinfection (approximately 500 ppm)

Preparing a 1: 100 Household Bleach Solution:
- 5 ml (1 teaspoons) household bleach + 500 ml (2 cups) water
- 62 ml (1/4 cup) household bleach + 6138 ml (24 3/4 cups) water

Recommended Uses:
- for use on non-critical medical or personal service instruments

Low level disinfection (approximately 100 ppm)

Preparing a 1: 500 Household Bleach Solution:
- 1 ml (1/4 teaspoons) household bleach to 500 ml (2 cups) water
- 20 ml (4 teaspoons) household bleach to 10 L (40 cups or approx. 2 gallons)

Recommended Uses:
- safe level for toys, dishes and utensils and food contact surfaces

Household bleach (5.25% sodium hypochlorite) mixed with water, is an inexpensive and effective disinfectant. By mixing different amounts of bleach with water you can make a high, intermediate-high, intermediate, or low level disinfectant.
1. IDENTIFICATION

Product identifier
Product Name Prime Source Germicidal Ultra Bleach

Other means of identification
Product UPC 27351-00350
Product Code 11009315041
Part Number 75000350

Recommended use of the chemical and restrictions on use
Uses advised against Do not mix with other chemicals

Details of the supplier of the safety data sheet
Distributor Prime Source
PO Box 41911
St. Louis, MO 63141

Emergency telephone number
Emergency Telephone Poison Control Center (Medical) : (866) 366-5048
Chemtrec (Transportation) 1-800-424-9300, 703-527-3887

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 1

Label elements

Emergency Overview

Danger

Hazard statements
Causes skin irritation
Causes serious eye damage

Color light yellow
Physical state liquid
Odor Chlorine

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response
Immediately call a POISON CENTER or doctor/physician
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician
IF ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse

Precautionary Statements - Storage
Keep out of reach of children. Store in a well-ventilated place. Store in a closed container. Protect from sunlight.

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
0% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hypochlorite</td>
<td>7681-52-9</td>
<td>6</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Description of first aid measures

Eye contact
Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.

Skin contact
Wash skin with soap and water. If symptoms persist, call a physician.

Inhalation
Remove to fresh air.

Ingestion
Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed

Symptoms
No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians
Treat symptomatically. Probable mucosal damage may contraindicate the use of gastric lavage.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
No information available.

Specific hazards arising from the chemical
No information available.

**Explosion data**
- Sensitivity to Mechanical Impact: None.
- Sensitivity to Static Discharge: None.

**Protective equipment and precautions for firefighters**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions**
Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation, especially in confined areas.

**Environmental precautions**
See Section 12 for additional ecological information.

**Methods and material for containment and cleaning up**

**Methods for containment**
Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up**
Pick up and transfer to properly labeled containers.

### 7. HANDLING AND STORAGE

**Precautions for safe handling**
Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Use personal protective equipment as required. Handle in accordance with good industrial hygiene and safety practice.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions**
Keep containers tightly closed in a dry, cool and well-ventilated place.

**Incompatible materials**
Acids, Ammonia.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

**Exposure Guidelines**
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Appropriate engineering controls**

**Engineering Controls**
Shower
Eyewash stations
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**
Wear safety glasses with side shields (or goggles).

**Skin and body protection**
Wear protective gloves and protective clothing.

**Respiratory protection**
If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be
9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>clear, light yellow</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>light yellow</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Chlorine</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>12.0 - 12.5</td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit:</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Lower flammability limit:</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Vapor density</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>~1.08</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>Soluble in water</td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Bulk density</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No information available</td>
<td></td>
</tr>
</tbody>
</table>

Other Information

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Softening point</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Molecular weight</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>VOC Content (%)</td>
<td>No information available</td>
<td></td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid
Do not mix with other chemicals. Extremes of temperature and direct sunlight.

Incompatible materials
Acids, Ammonia.

Hazardous Decomposition Products
None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Inhalation
Inhalation of vapors in high concentration may cause irritation of respiratory system.

Eye contact
Avoid contact with eyes. May cause burns.

Skin contact
Avoid contact with skin. May cause irritation.

Ingestion
May be harmful if swallowed.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hypochlorite</td>
<td>= 8200 mg/kg (Rat)</td>
<td>&gt; 10000 mg/kg (Rabbit)</td>
<td>-</td>
</tr>
</tbody>
</table>

**Information on toxicological effects**

**Symptoms**
No information available.

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

**Sensitization**
No information available.

**Germ cell mutagenicity**
No information available.

**Carcinogenicity**
The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hypochlorite</td>
<td></td>
<td>Group 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7681-52-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

IARC (International Agency for Research on Cancer)
Not classifiable as a human carcinogen

**Reproductive toxicity**
No information available.

**STOT - single exposure**
No information available.

**STOT - repeated exposure**
No information available.

**Aspiration hazard**
No information available.

**Numerical measures of toxicity - Product Information**

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**
Very toxic to aquatic life with long lasting effects

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hypochlorite</td>
<td>0.095: 24 h Skeletonema costatum mg/L EC50</td>
<td>0.06 - 0.11: 96 h Prinephales promelas mg/L LC50 flow-through 4.5 - 7.6: 96 h Prinephales promelas mg/L LC50 static 0.4 - 0.8: 96 h Lepomis macrochirus mg/L LC50 static 0.28 - 1: 96 h Lepomis macrochirus mg/L LC50 flow-through 0.05 - 0.771: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.03 - 0.19: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 0.18 - 0.22: 96 h Oncorhynchus mykiss mg/L LC50 static</td>
<td>0.033 - 0.044: 48 h Daphnia magna mg/L EC50 Static 2.1: 96 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td>7681-52-9</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Persistence and degradability**
No information available.

**Bioaccumulation**
No information available.
Mobility
No information available.

Other adverse effects
No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes
Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging
Do not reuse container. Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

Note:
Product classified as UN 3077 or UN 3082 that are shipped in containers not exceeding 5 kg or 5 L may ship as Not Subject to the provisions of the IMDG Code and Not Restricted under IATA. Refer to IMDG Ch 2.10 and IATA SP-197.

DOT
Not regulated

TDG
Not regulated

IATA
UN/ID no. 3082
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (SODIUM HYPOCHLORITE)
Hazard Class 9
Packing Group III
Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (SODIUM HYPOCHLORITE), 9, III

IMDG
UN/ID no. 3082
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (SODIUM HYPOCHLORITE)
Hazard Class 9
Packing Group III
Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (SODIUM HYPOCHLORITE), 9, III

Marine pollutant This material meets the definition of a marine pollutant

15. REGULATORY INFORMATION

International Inventories
TSCA Complies
DSL/NDSSL Complies

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any
chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

- Acute health hazard: Yes
- Chronic Health Hazard: No
- Fire hazard: No
- Sudden release of pressure hazard: No
- Reactive Hazard: No

**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hypochlorite</td>
<td>100 lb</td>
<td>-</td>
<td>-</td>
<td>X</td>
</tr>
</tbody>
</table>

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA/SARA RQ</th>
<th>Reportable Quantity (RQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hypochlorite</td>
<td>100 lb</td>
<td>-</td>
<td>RQ 100 lb final RQ</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>RQ 45.4 kg final RQ</td>
</tr>
</tbody>
</table>

**US State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hypochlorite</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** 70271-13-68613

**EPA Statement**

This chemical is a pesticide product registered by the 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, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

**Difference between SDS and EPA Pesticide label**

DANGER: Corrosive. May cause severe skin and eye irritation or chemical burns to broken skin. Causes eye damage. Wear safety glasses and rubber gloves when handling this product. Wash after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Avoid breathing vapors. Vacate poorly ventilated areas as soon as possible. Do not return until strong odors have dissipated.

**16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION**

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health hazards 2</th>
<th>Flammability 0</th>
<th>Instability 1</th>
<th>Physical and Chemical Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMIS</td>
<td>Health hazards 2</td>
<td>Flammability 0</td>
<td>Physical hazards 1</td>
<td>Personal protection B</td>
</tr>
</tbody>
</table>

Prepared By: Regulatory Affairs
Revision Date: 25-Jul-2016
Revision Note: No information available

Disclaimer:
The information provided in this Material 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 guidance for safe handling, use, processing,
storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

End of Safety Data Sheet