Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 05/07/2010 Reviewed on 05/06/2010

1 Identification of substance:

Product details:

Product name: Sodium chlorite, tech. 80%

Stock number: 14265

Manufacturer/Supplier:
Alfa Aesar, A Johnson Matthey Company
Johnson Matthey Catalog Company, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Emergency Phone: (978) 521-6300
CHEMTREC: (800) 424-9300
Web Site: www.alfa.com

Information Department: Health, Safety and Environmental Department
Emergency information:
During normal hours the Health, Safety and Environmental Department. After normal hours call Chemtrec at (800) 424-9300.

2 Composition/Data on components:

Chemical characterization:
Description: (CAS#)
Sodium chlorite (CAS# 7758-19-2): 80%
Sodium chloride (CAS# 7647-14-5): 15%
Sodium carbonate (497-19-8): 5%
Identification number(s):
EINECS Number: 231-836-6

3 Hazards identification

Hazard description:

T Toxic
O Oxidizing

Information pertaining to particular dangers for man and environment
R 8 Contact with combustible material may cause fire.
R 22 Harmful if swallowed.
R 23/24 Toxic by inhalation and in contact with skin.
R 32 Contact with acids liberates very toxic gas.
R 34 Causes burns.
Classification system
HMIS ratings (scale 0-4)
(Hazardous Materials Identification System)

HEALTH	2
FIRE	0
REACTIVITY	2

Health (acute effects) = 2
Flammability = 0
Reactivity = 2

GHS label elements

Danger

2.14/2 - May intensify fire; oxidizer.

Danger

3.1/3 - Toxic if swallowed.
3.1/2 - Fatal in contact with skin.
3.1/2 - Fatal if inhaled.

Danger

3.2/1C - Causes severe skin burns and eye damage.
Prevention:
Take any precaution to avoid mixing with combustibles.
Wear protective gloves/protective clothing/eye protection/face protection.

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Response:
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or if you feel unwell:
Immediately call a POISON CENTER or doctor/physician.

4 First aid measures

General information
Immediately remove any clothing soiled by the product.
In case of irregular breathing or respiratory arrest provide artificial respiration.
After inhalation
Supply fresh air. If required, provide artificial respiration. Keep patient warm.
Seek immediate medical advice.
After skin contact
Immediately wash with water and soap and rinse thoroughly.
Seek immediate medical advice.
After eye contact
Rinse opened eye for several minutes under running water. Then consult a doctor.
After swallowing
Do not induce vomiting; immediately call for medical help.
Seek immediate medical advice.

5 Fire fighting measures

Suitable extinguishing agents Water spray
For safety reasons unsuitable extinguishing agents Water with full jet.
Special hazards caused by the material, its products of combustion or resulting gases:
In case of fire, the following can be released:
Hydrogen chloride (HCl)
Chlorine dioxide
Sodium oxide
This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.
Protective equipment:
Wear self-contained respirator.
Wear fully protective impervious suit.

6 Accidental release measures

Person-related safety precautions:
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Measures for environmental protection:
Do not allow material to be released to the environment without proper governmental permits.
Measures for cleaning/collecting:
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Additional information:
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

Handling
Information for safe handling:
Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation at the workplace.
Information about protection against explosions and fires:
Substance/product can reduce the ignition temperature of flammable substances.
This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.

Storage
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility:
Do not store together with acids.
Store away from flammable substances.

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Store away from reducing agents.
Further information about storage conditions:
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.

8 Exposure controls and personal protection

Additional information about design of technical systems:
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Components with limit values that require monitoring at the workplace: Not required.
Additional information: No data

Personal protective equipment
General protective and hygienic measures
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Remove all soiled and contaminated clothing immediately.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Breathing equipment: Use suitable respirator when high concentrations are present.
Protection of hands: Impervious gloves
Eye protection: Safety glasses
Body protection: Protective work clothing.

9 Physical and chemical properties:

General Information	
Form:	Flakes Powder
Color:	White
Odor:	Odorless
Change in condition	
Melting point/Melting range:	180-200°C (356-392°F) (dec)
Boiling point/Boiling range:	Not determined
Sublimation temperature / start:	Not determined
Flash point:	Not applicable
Flammability (solid, gaseous)	Contact with combustible material may cause fire.
Ignition temperature:	Not determined
Decomposition temperature:	Not determined
Explosion limits:	
Lower:	Not determined
Upper:	Not determined
Vapor pressure:	Not determined
Density:	Not determined
Solubility in / Miscibility with	
Water at 20°C (68°F):	390 g/l
pH-value (50 g/l) at 20°C (68°F):	12-13

10 Stability and reactivity

Thermal decomposition / conditions to be avoided:
Decomposition will not occur if used and stored according to specifications.
Stable until: 175°C
Materials to be avoided:
Acids
Reducing agents, easily oxidized materials
Sulfur
Ammonia
Dangerous reactions
Reacts with reducing agents
Acts as an oxidizing agent on organic materials such as wood, paper and fats
Reacts with flammable substances
Contact with acids liberates very toxic gas.

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Reacts with acids releasing chlorine dioxide (ClO2)
Dangerous products of decomposition:
Sodium oxide
Chlorine dioxide

11 Toxicological information

Acute toxicity:

LD/LC50 values that are relevant for classification:		
Oral	LD50	278 mg/kg (rat) (external SDS)
Dermal	LD50	134 mg/kg (rabbit) (external SDS)
Inhalative	LC50/4H	287 mg/m3/4H (rat) (RTECS)

Primary irritant effect:
on the skin: Corrosive effect on skin and mucous membranes.
on the eye: Strong corrosive effect.
Sensitization: No sensitizing effects known.
Other information (about experimental toxicology):
Mutagenic effects have been observed on tests with laboratory animals.
Tumorigenic effects have been observed on tests with laboratory animals.
Subacute to chronic toxicity:
Chronic ingestion of low concentrations by laboratory animals has a minor supression of thyroid function and a mild anemia.
Subacute to chronic toxicity:
Corrosive materials are acutely destructive to the respiratory tract, eyes, skin and digestive tract. Eye contact may result in permanent damage and complete vision loss. Inhalation may result in respiratory effects such as inflammation, edema, and chemical pneumonitis. May cause coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting. Ingestion may cause damage to the mouth, throat and esophagus. May cause skin burns or irritation depending on the severity of the exposure.
Additional toxicological information:
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
Danger through skin absorption.
Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.
IARC-3: Not classifiable as to carcinogenicity to humans.

12 Ecological information:

Additional ecological information:
General notes:
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Do not allow material to be released to the environment without proper governmental permits.
Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

13 Disposal considerations

Product:
Recommendation Consult state, local or national regulations to ensure proper disposal.

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.
Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

DOT regulations:

Hazard class: 5.1
Identification number: UN1496
Packing group: II

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Proper shipping name (technical name):	SODIUM CHLORITE
Label	5.1

Land transport ADR/RID (cross-border)

ADR/RID class:	5.1 (O2) Oxidizing substances
Danger code (Kemler):	50
UN-Number:	1496
Packaging group:	II
Description of goods:	1496 SODIUM CHLORITE

Maritime transport IMDG:

IMDG Class:	5.1
UN Number:	1496
Label	5.1
Packaging group:	II
Marine pollutant:	No
Proper shipping name:	SODIUM CHLORITE

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class:	5.1
UN/ID Number:	1496
Label	5.1
Packaging group:	II
Proper shipping name:	SODIUM CHLORITE

UN "Model Regulation": UN1496, SODIUM CHLORITE, 5.1, II

15 Regulations

Product related hazard informations:

Hazard symbols:
T Toxic
O Oxidizing

Risk phrases:
8 Contact with combustible material may cause fire.
22 Harmful if swallowed.
23/24 Toxic by inhalation and in contact with skin.
32 Contact with acids liberates very toxic gas.
34 Causes burns.

Safety phrases:
17 Keep away from combustible material.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
45 In case of accident or if you feel unwell, seek medical advice immediately.

National regulations
All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.
All components of this product are listed on the Canadian Domestic Substances List (DSL).

Information about limitation of use: For use only by technically qualified individuals.

16 Other information:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished

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without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing MSDS: Health, Safety and Environmental Department.
Contact: Zachariah Holt

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent