

418

Safety Data Sheet

Section 1: Identification

Product Identifier and Other Means of Identification

Product Identifier: 418**Other Means of Identification:** Positive Developer**Related Part #** 418-500ML

Recommended Use and Restriction on Use

Use: Developer for MG Chemicals pre-sensitized boards**Uses Advised Against:** Not available

Details of Manufacturer or Importer

Manufacturer

MG Chemicals
1210 Corporate Drive
Burlington, Ontario L7L 5R6
CANADA

MG Chemicals (Head Office)
9347-193 Street
Surrey, British Columbia V4N 4E7
CANADA

TEL +1-800-340-0772**FAX** +1-800-340-0773**E-MAIL** support@mgchemicals.com**WEB** www.mgchemicals.com**TEL** +1-905-331-1396**FAX** +1-905-331-2682**E-MAIL** info@mgchemicals.com**E-MAIL** (Competent Person): sds@mgchemicals.com

Emergency Phone Number

For hazardous material incidents ONLY (leaks, spills, fires, exposures or accidents)
USA or CANADA—Call Verisk 3E at **+1-866-519-4752** or **+1-760-476-3962**
(Service access code: 335388)

For emergencies involving the transport of dangerous goods; 24/7 service
CANADA—Call CANUTEC collect at **+1-613-996-6666** or ***666** on cellular phones

418
Section 2: Hazard(s) Identification
Classification of Hazardous Chemical
GHS Categories

Criteria	Category	Signal Word	Pictograms
Skin Corrosion	1	Danger	Corrosion
Eye Corrosion	1	Danger	Corrosion
Corrosive to metals	1	Warning	Corrosion
Hazardous to the Aquatic Environment Acute	3	none	none

Note: The degree of severity is ranked within each hazard class from 1 (Highest Severity) to up to 5 (Lowest Severity), which is opposite to HMIS and NFPA conventions. Severity category rankings do not allow comparisons between classes.

Label Elements

Signal Word	DANGER
Pictograms	Hazard Statements
	H314: Causes severe skin burns and eye damage H290: May be corrosive to metals
<i>none mandated</i>	H402: Harmful to aquatic life
Prevention	Precautionary Statements
P260	Do not breathe dust or mists.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves, and eye protection.
P234	Keep only in original packaging.
P273	Avoid release to the environment.

Section continued on the next page

418
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Response	Precautionary Statements
P310	Immediately call a POISON CENTRE or doctor.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P363	Wash contaminated clothing before reuse.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P390	Absorb spillage to prevent material-damage.
Storage	Precautionary Statements
P405	Store locked up.
P406	Store in a corrosion resistant container with a resistant inner liner.
Disposal	Precautionary Statements
P501	Dispose of contents in accordance to local, regional, national, and international regulations.

Hazards Not Otherwise Classified

Other Criteria	Hazard Statements/Precautionary Statement	Signal Word	Pictograms
None	None	None	None

Section 3: Composition/Information on Ingredients

CAS #	Chemical Name	%(weight)
1310-73-2	sodium hydroxide	7-11%

Note: de-ionized water is the main component.

418
Section 4: First-Aid Measures

<i>Exposure Condition</i>	<i>GHS Code/Symptoms/Precautionary Statements</i>
IF IN EYES	P305 + P351 + P338, P310
Immediate Symptoms	<i>redness, pain, blurred vision, severe burns</i>
Response	Rinse cautiously with water for 60 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE or doctor.
IF ON SKIN (or hair)	P303 + P361, P351, P310
Immediate Symptoms	<i>soapy sensation, redness, pain, burns, blisters</i>
Delayed Symptoms	<i>Delayed onset of pain by minutes or hours</i>
Response	Take off immediately contaminated clothing. Rinse cautiously with water for several minutes. Immediately call a POISON CENTRE or doctor.
IF INHALED	P304 + P340, P310 (Unlikely route unless processing creates mist or dust form)
Immediate Symptoms	<i>coughing, wheezing, shortness of breath, inflammation, burning sensation</i>
Response	Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTRE or doctor.
IF SWALLOWED	P301 + P330 + P331, P310
Immediate Symptoms	<i>mouth burns, burning sensation in throat and chest, abdominal pain, nausea, vomiting, shock or collapse</i>
Response	Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTRE or doctor.

418

Section 5: Fire-Fighting Measures

Extinguishing Media	In case of fire: Use extinguishing media suitable for surrounding material.
Specific Hazards	Will not burn. Highly caustic material: avoid skin or eye contact or inhalation of fumes or mist. Solution may react violently with acids and metals to form flammable explosive gases.
Combustion Products	Produces sodium oxides.
Fire-Fighter	Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

Section 6: Accidental Release Measures

Personal Protection	See personal protection recommendations in Section 8.
Precautions for Response	Do not breath the mist, spray, or fumes.
Environmental Precautions	Avoid releasing to the environment. Prevent spill from entering drains and waterways. Do not flush to sewer.
Containment Methods	Contain with inert absorbent (such as soil, sand, vermiculite).
Cleaning Methods	Sprinkle inert absorbent compound onto spill, then sweep into the container. You may neutralize residues with low concentration acetic acid (also known as vinegar). Rinse spill area water to remove the last traces.
Disposal Methods	Dispose of spill waste according to Section 13.

418
Section 7: Handling and Storage
Prevention

Keep out of reach of children.

Do not get in eye, on skin, or on clothing. Do not breathe mist or spray. Do not eat, drink, or smoke when using this product.

Avoid release to the environment.

Absorb spillage to prevent material-damage.

Handling

Wear protective gloves and eye protection.

Specific Recommendations: Wear neoprene, butyl rubber, nitrile or other impervious gloves with breakthrough time greater than intended use period.

Wash hands thoroughly after handling.

Storage

Do not store together with acids.

Keep tightly closed.

Store locked up.

Keep only in original packaging.

Section 8: Exposure Controls/Personal Protection
Substances with Occupational Exposure Limit Values

Chemical Name	Country/ Provinces	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
sodium hydroxide	ACGIH TWA	2 mg/m ³	Not established
	U.S.A. OSHA PEL	2 mg/m ³	Not established
	Canada AB	2 mg/m ³	Not established
	Canada BC	2 mg/m ³	Not established
	Canada ON	2 mg/m ³	Not established
	Canada QC	2 mg/m ³	Not established

Note: Ingredients are listed in descending weight contribution order (from greatest to least). The ACGIH¹, OSHA (Table Z-1), and Canadian provinces exposure limits were consulted. Limits from RTECS database² and from suppliers' SDS were also consulted. Short term exposure limits (STEL) are for 15 min and long-term permissible exposure limits (PEL) for 8 h.

Section continued on the next page

418**Engineering Controls**

Ventilation Keep airborne concentrations below the occupational exposure limits (OEL).

Personal Protective Equipment

Eye protection Wear appropriate protective eyeglasses or chemical safety goggles.

RECOMMENDATION: Ensure that glasses have side shields for lateral protection.

Skin Protection Wear appropriate protective clothing to prevent skin contact.

RECOMMENDATION: Use of protective gloves in butyl rubber, latex, neoprene, or other chemically resistant gloves.

Respiratory Protection For over-exposures up to 10 x OEL of mist or spray, wear respirator such as a half-mask respirator with organic vapor cartridges.

Above 10 x OEL, use a positive-pressure, air-supplied respirator or a self-contained breathing apparatus.

RECOMMENDATION: Consult your local safety supply store to ensure that your respirator has a NIOSH (U.S.) approved filter cartridges appropriate for the ingredients listed in Section 3. The respirator should be fitted to the employee by a professional. Ensure vapor cartridges are stored in sealed plastic bags when not being used.

General Hygiene Considerations

Wash hands thoroughly with water and soap after handling.

418
Section 9: Physical and Chemical Properties

Physical State	Liquid	Lower Flammability Limit	Not applicable
Appearance	Clear	Upper Flammability Limit	Not applicable
Odor	Odorless	Vapor Pressure @20 °C	1.5 mmHg [0.2 kPa]
Odor Threshold	Not applicable	Vapor Density	Not available
pH	14	Relative Density @25 °C	1.1
Freezing/Melting Point	Not available	Solubility in Water	111 g NaOH in 100 g H ₂ O
Initial Boiling Point	≥100 °C [≥212 °F]	Partition Coefficient n-octanol/water	Not available
Flash Point	Not applicable	Auto-ignition Temperature	Not available
Evaporation Rate	Not available	Decomposition Temperature	Not available
Flammability	Non Flammable	Viscosity @25 °C	Not available

Section 10: Stability and Reactivity

Reactivity	Reacts with acids. Reacts with alkaline earth metals. Corrosive to aluminum alloys, carbon steel, and other metals.
Chemical Stability	Chemically stable at normal temperatures and pressures
Conditions to Avoid	Incompatible substances.
Incompatibilities	Strong oxidizing agents, strong acids, metals (zinc, aluminum, tin, and so on), ammonium salts
Polymerization	Will not occur
Decomposition	Will not decompose under normal conditions. For thermal decomposition, see combustion products in Section 5.

418
Section 11: Toxicological Information
Summary of Effects and Symptoms by Routes of Exposure

Eyes	Causes serious eye burns. Permanent damage including blindness can result.
Skin	Causes serious skin burns. May lead to deep ulcers. Permanent scarring can result.
Inhalation	Can cause severe irritation of the nose and throat. Can damage tissue of the mucous membrane and upper respiratory tract.
Ingestion	May be harmful if swallowed. Causes burns to the gastrointestinal tract.
Chronic	Prolonged or repeated skin contact may cause dermatitis (dry, red, cracked skin).

Acute Toxicity (Lethal Exposure Concentrations)

Chemical Name	LD50 oral	LD50 dermal	LC50 inhalation
sodium hydroxide	Not available	Not available	Not available

Note: Toxicity data from the RTECS² and ECHA databases were consulted. The data from supplier SDS were also consulted.

Other Toxicological Effects

Skin corrosion/irritation	Causes severe skin burns. Prolonged or repeated skin contact may cause dermatitis.
Serious eye damage/irritation	Causes severe eye damage.
Sensitization (allergic reactions)	Based on available data, the classification criteria are not met.
Carcinogenicity (risk of cancer)	Not classified or listed as a carcinogen under IARC, ACGIH, CA Prop 65, or NTP.
Mutagenicity (risk of heritable genetic effects)	Based on available data, the classification criteria are not met.
Reproductive Toxicity (risk to sex functions)	Based on available data, the classification criteria are not met.

Section continued on the next page

418

Teratogenicity (risk of fetus malformation)	Based on available data, the classification criteria are not met.
STOT-single exposure	Based on available data, the classification criteria are not met.
STOT-repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Based on available data, the classification criteria are not met.

Section 12: Ecological Information

Ecological classifications are based on the IMDG/GHS criteria in conjunction with ecotoxicological data from our suppliers, the European Chemical Agency database (<http://echa.europa.eu>), and other reliable sources.

Acute Ecotoxicity

Category 3

Harmful to aquatic life

Avoid release to the environment.

Chronic Ecotoxicity

Not available

Biodegradability

No data available

Other Effects

Not available

Section 13: Disposal Information

Dispose of contents in accordance with all local, regional, national, and international regulations.

418

Section 14: Transport Information

Ground

Refer to TDG regulations (Canadian Transportation of Dangerous Goods regulations); **USA DOT 49 CFR** (Parts 100 to 185) **Regulations.**

Sizes 1 L and under
418-500ML

Limited Quantity



Air

Refer to ICAO-IATA Dangerous Goods Regulations.

Sizes 0.5 L and under
418-500ML

Limited Quantity



Packing Instr. Y840

FOR REFERENCE ONLY

UN number: UN1824

Shipping Name: SODIUM HYDROXIDE SOLUTION

Class: 8

Packing Group: II

Marine Pollutant: No

Special Provision: Packing Instr. 851 (Max Net Qty: 1L).



NOTE: Avoid shipping by air if possible.

Sea

Refer to IMDG regulations.

Sizes 1 L and under
418-500ML

Limited Quantity



FOR REFERENCE ONLY

UN number: UN1824

Shipping Name: SODIUM HYDROXIDE SOLUTION

Class: 8

Packing Group: II

Marine Pollutant: No



Note: Shipper must be appropriately trained and certified before involvement with the transport of dangerous goods.

418**Section 15: Regulatory Information****Canada****Domestic Substance List (DSL) / Non-Domestic Substance Lists (NDSL)**

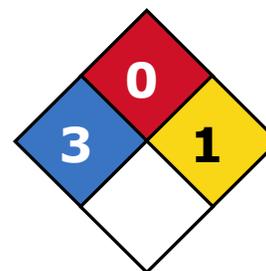
All hazardous ingredients are listed on the DSL/NDSL.

Hazardous Products Act (R.S.C., 1985, c. H-3)

The safety data sheet and label comply with the Hazardous Product Act and WHMIS 2015.

USA**Other Classifications****HMIS[®] RATING**

HEALTH:	3
FLAMMABILITY:	0
PHYSICAL HAZARD:	1
PERSONAL PROTECTION:	

NFPA[®] 704 CODES

Approximate HMIS and NFPA Risk Ratings Legend:

0 (Low or none); 1 (Slight); 2 (Moderate); 3 (Serious); 4 (Severe)

CAA (Clean Air Act, USA)

This product does not contain any class 1 ozone depleting substances.

This product does not contain any class 2 ozone depleting substances.

This product does not contain ingredients that are listed as hazardous air pollutants.

EPCRA (Emergency Planning and Right to Know Act, USA, 40 CFR 372.45)

This product does not contain any substances subject to the reporting requirements of section 313 Title III of the SARA of 1986 and 40 CFR part 372.

TSCA (Toxic Substances Control Act of 1976, USA)

All substances are TSCA listed.

California Proposition 65 (Chemicals known to cause cancer or reproductive toxicity, USA).

This product does not contain any listed substances in California.

Section continued on the next page

418**Europe****RoHS** (Restriction of Hazardous Substances Directive)

This product does not contain any lead, cadmium, mercury, hexavalent chromium, PBB's, PBDE's, DEHP, BBP, DBP, or DIBP and complies with European RoHS regulations.

WEEE (Waste Electrical and Electronic Equipment Directive)

This product is not a piece of electrical or electronics equipment and is therefore not governed by this regulation.

Section 16: Other Information

Prepared by the Regulatory Affairs Department

Date of Issue 26 February 2020

Supersedes 08 August 2019

Reason for Changes: Update to the emergency phone number information.

Reference

1) All toxicological data were checked against the RTECS (Registry of Toxic Effects of Chemical Substances®)

2) ACGIH 2017 TLVs and BEIs: Based on the documentation of the threshold limit values for chemical substances and physical agents & biological exposure indices, American Conference of Governmental of Industrial Hygienist Cincinnati, OH (2017).

Section continued on the next page

418**Abbreviations**

ACGIH	American Conference of Governmental Industrial Hygienists (USA)
EC50	Half maximal effective concentration
EL50	Half maximal effective loading
IARC	International Agency for Research on Cancer
NOELR	No observable effect loading ratio
NTP	National Toxicology Program
GHS	Globally Harmonized System of Classification of Labeling of Chemicals
LC50	Lethal Concentration 50%
LCLo	Lowest published lethal concentration
LD50	Lethal Dose 50%
OEL	Occupational Exposure Limit
PEL	Permissible Exposure Limit
SDS	Safety Data Sheet
STEL	Short-Term Exposure Limit
TCLo	Lowest published toxic concentration
TWA	Time Weighted Average
VOC	Volatile Organic Content
Wt	Weight

Technical Queries Contact us regarding any questions, improvement suggestions, or problems with this product. Application notes, instructions, and FAQs are located at www.mgchemicals.com.

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