NATIONAL CHEMICAL LABORATORIES, INC.

World Class Cleaning Solutions®

SAFETY DATA SHEET

Section 1 - Identification

Product Identifier	ASTRO-CHEM Industrial Degreaser Cleaner Concentrate
Other means of identification	1020
Recommended use	Alkaline cleaner.
Recommended restrictions	For commercial and industrial use only.

Manufacturer / Importer / Supplier / Distributor Information

Company Name	National Chemical Laboratories of PA, Inc.
Address	401 N. 10th Street - Philadelphia, PA 19123
Telephone	1 (215) 922-1200
Supplier Email	info@nclonline.com
Contact	CHEM-TEL
Emergency Phone	1 (800) 255-3924

Section 2 - Hazard(s) Identification

SDS Hazards and Warnings are based on the undiluted product. Refer to diluted SDS for Ready-To-Use Hazards and Warnings.

	Classification	Category	
Physical Hazards	Not Classified		
Health Hazards	Serious eye damage/eye irritation	1	
	Skin corrosion/irritation	1	
	Specific target organ toxicity, single exposure	3	TARGET ORGAN: respiratory tract irritation
OSHA defined hazards	Not Classified.		

Label Elements

Hazard Symbol

Signal Word	Danger
Hazard Statement	Causes severe skin burns and eye damage. May cause respiratory irritation.

Precautionary statement

Prevention	Do not breathe mist or vapor. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area.
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. Wash contaminated clothing before reuse. 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. Immediately call a poison center/doctor.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.

Section 3 - Composition/Information on ingredients

Mixture

Hazardous Components

Ingredient Name	CAS #	%
2-Butoxyethanol	111-76-2	5 - 10
Sodium dimethylbenzenesulfonate	1300-72-7	1 - 5
Sodium dodecylbenzenesulfonate	25155-30-0	1 - 5
Sodium Hydroxide	1310-73-2	1 - 5
Sodium Silicate	1344-09-8	1 - 5
Nonylphenol, ethoxylated	9016-45-9	1 - 5

Section 4 - First-aid Measures

Inhalation	If respiratory irritation or distress occurs, remove victim to fresh air. If breathing is difficult, give oxygen. If breathing stops, apply artificial respiration. CONSULT A PHYSICIAN.
Skin contact	Remove contaminated clothing and shoes. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if irritation persists. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 20 minutes, occasionally lifting the upper and lower eyelids. Check and remove contact lenses. Continue to rinse for at least 10 minutes.
Ingestion	Rinse mouth thoroughly with water. DO NOT induce vomiting. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head lower than the hips to help prevent aspiration. Call a physician or poison control center immediately.
Most Important symptoms /effects, acute and delayed	Causes skin and eye burns.
Indication of immediate medical attention and special treatment	Treat symptomatically.
General Information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

Section 5 - Fire-fighting measures

Suitable extinguishing media	Carbon dioxide, alcohol-resistant foam, dry chemical, water spray, or water fog.
Unsuitable extinguishing media	Not available.
Specific hazards arising from the chemical	None known.
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	Move containers from fire area if you can do it without risk. Use water spray to keep fire-exposed containers cool.
General fire hazards	This product is not flammable or combustible.

Section 6 - Accidental release measures

Personal precautions, protective equipment and emergency procedures.	Isolate area. Keep unnecessary personnel away. Use personal protection as recommended in Section 8 of the SDS.
Methods and materials for containment and cleaning up	SMALL SPILLAGE: Absorb spillage with suitable absorbent material. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. After removal flush contaminated area thoroughly with water. LARGE SPILLS: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. After removal flush contaminated area thoroughly with water.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

Section 7 - Handling and storage

Precautions for safe handling	Do not get in eyes, on skin, or on clothing. Do not breathe mist or vapor. Do not taste or swallow. Use with adequate ventilation. Wash thoroughly after handling. Use Personal Protective Equipment recommended in section 8 of the SDS.
Conditions for safe storage, including any incompatibilities	Store away from incompatible materials. Keep container closed.

Section 8 - Exposure control/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
2-Butoxyethanol (CAS 111-76-2)	TWA	240 mg/m³ , 50 ppm	
Sodium Hydroxide (CAS 1310-73-2)	TWA	2 mg/m³	

US. ACGIH Threshold Limit Values

Component	Type	Value	Form
2-Butoxyethanol (CAS 111-76-2)	TWA	20 ppm	
Sodium Hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m³	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	TWA	24 mg/m³, 5 ppm
Sodium Hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m³

US. ACGIH. BEIs. Biological Exposure Indices

Components	Value	Determinate	Specimen	Sampling Time
2-Butoxyethanol (CAS 111-76-2)	200 mg/g	Butoxyacetic acid (BAA), with hydrolysis	Creatinine in urine	*

*** - For sampling details, please see the source document.**

US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants

Components	Exposure
2-Butoxyethanol (CAS 111-76-2)	Can be absorbed though the skin.

US.Minnesota Hazardous Substances List (Minn. Rules 5206.0400).

Components	Exposure
2-Butoxyethanol (CAS 111-76-2)	Skin designation applies.

US.NIOSH: Pocket Guide to Chemical Hazards

Component	Exposure
2-Butoxyethanol (CAS 111-76-2)	Can be absorbed though the skin.

US.OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.100)

Components	Exposure
2-Butoxyethanol (CAS 111-76-2)	Can be absorbed though the skin.

US.OSHA Table Z-1-A (29 CFR 1910.100)

Components	Exposure
2-Butoxyethanol (CAS 111-76-2)	Can be absorbed though the skin.

US.Rhode Island Hazardous Substances Right-to-Know Act (R.I. Gen. Laws Section 28-21-1 et. seq.)

Components	Exposure
2-Butoxyethanol (CAS 111-76-2)	Can be absorbed though the skin.

US.Tennesee. OELs Occupational Exposure Limkits, Table Z1A

Components	Exposure
2-Butoxyethanol (CAS 111-76-2)	Can be absorbed though the skin.

Appropriate engineering controls Provide adequate ventilation and minimize the risk of inhalation of vapors and mists. Provide easy access to water supply and eye wash facilities.

Individual protection measures, such as personal protective equipment

Eye/face protection If use of product risks exposure to contact, wear safety glasses with side shields.

Skin protection

Hand protection Impervious gloves are recommended for prolonged use.

Other If use of product risk exposure to contact, wear suitable protective clothing.

Respiratory protection Use a respirator when local exhaust or ventilation is not adequate to keep exposures below the OEL. In a confined space a supplied respirator may be required.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations 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.

Section 9 - Physical and chemical properties

Appearance Clear.

Physical state Liquid.

Form Liquid.

Color Green.

Odor Citrus.

Odor threshold Not available.

pH 13.3

Melting point/freezing point Not available.

Initial boinging point and boiling range 212 °F (100 °C)

Flash point > 212.0 °F (> 100.0 °C)

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure Similar to water.

Vapor density Similar to water.

Relative density 1.03 ± 0.01

Relative density temperature 75 °F (23.9 °C)

Solubilities (water) 100 % Soluble.

Partition Coefficient n-octanol/water Not available

Auto-ignition temperature	Not Available
Decomposition temperature	Not Available
Viscosity	< 10 cP
Viscosity Temperature	75 °F (23.9 °C)

Section 10 - Stability and reactivity

Reactivity	Not available.
Chemical stability	Stable at normal conditions.
Possiblity of hazardous reactions	Hazardous polymerization does not occur.
Conditions to Avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous Decomposition Products	Carbon monoxide. Carbon dioxide.

Section 11 - Toxicological information

Information on likely routes of exposure

Ingestion	May cause burns of the gastrointestinal tract if swallowed.
Inhalation	Irritating to respiratory system.
Skin contact	Causes skin burns.
Eye contact	Causes serious eye damage.
Symptoms related to the physical, chemical and toxicological characteristics	Causes skin and eye burns. Causes respiratory tract irritation. Symptoms may be delayed.

Information on toxicological effects.

Acute toxicity May cause burns.

Components	Level	Type	Code	Species	Results
2-Butoxyethanol (CAS 111-76-2)	Acute	Dermal	LD50	Rabbit	400 mg/kg
	Acute	Inhalation	LC50	Mouse	700 ppm, 7 hours
	Acute	Inhalation	LC50	Rat	450 mg/l, 4 hrs
	Acute	Oral	LD50	Guinea pig	1.2 g/kg
	Acute	Oral	LD50	Mouse	1519 mg/kg
	Acute	Oral	LD50	Rabbit	0.32 g/kg
	Acute	Oral	LD50	Rat	560 mg/kg
Nonylphenol, ethoxylated (CAS 9016-45-9)	Acute	Oral	LD50	Mouse	4290 mg/kg, bw
Sodium dimethylbenzenesulfonate (CAS 1300-72-7)	Acute	Dermal	LD50	Rabbit	>2000 mg/kg
	Acute	Oral	LD50	Rat	7200 mg/kg
Sodium Hydroxide (CAS 1310-73-2)	Acute	Oral	LD50	Rabbit	500 mg/kg
Sodium Silicate (CAS 1344-09-8)	Acute	Dermal	LD50	Rabbit	>4640 mg/kg
	Acute	Oral	LD50	Rat	1.1 g/kg

Skin corrosion/irritation	Causes skin burns.
Serious eye damage/ eye irritation	Causes serious eye damage.
Respiratory sensitization	Not classified.
Skin sensitization	Not classified.
Germ cell mutagenicity	Not classified.

IARC Monographs. Overall Evaluation of Carcinogenicity

Component	Result	Comment
2-Butoxyethanol (CAS 111-76-2)	3	Not classifiable as to carcinogenicity to humans.

Reproductive toxicity	Not classified.
Specific target organ toxicity - single exposure	Irritating to respiratory system.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not classified.
Chronic effects	2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans. Prolonged or repeated exposure may cause liver and kidney damage. These effects have not been observed in humans.

Section 12 - Ecological Information

Ecotoxicity	The product contains a substance which is toxic to aquatic organisms.

Component(s)

Sodium dodecylbenzenesulfonate, 25155-30-0

Aquatic

Level	Type	Code	Species	Test Results
Acute	Crustacea	EC50	Water flea (Ceriodaphnia dubia)	3.26-14.51 mg/l , 48 hrs.
	Fish	LC50	Rainbow trout, donaldson trout (Oncorhynchus mykiss)	3.2-5.6 mg/l, 96 hrs.

Nonylphenol, ethoxylated, 9016-45-9

Aquatic

Acute	Crustacea	EC50	Daphnia magna	65 mg/l, 48 hours
	Crustacea	EC50	Water flea (Daphnia magna)	12.2 mg/l, 48 hours
	Fish	LC50	Bluegill (lepomis macrochirus)	1 - 1.8 mg/l 96 hours

Persistence and degradability The product is expected to be biodegradable.

Bioaccumulative potential Not known.

Partition coeficient n-octanol / water log (Kow)

Components	Results
2-Butoxyethanol (CAS 111-76-2)	0.83
Sodium dodecylbenzenesulfonate (CAS 25155-30-0)	0.45

Mobility in soil Not available.

Mobility in general The product is water soluble and may spread in water systems.

Other adverse effects None known.

Section 13 - Disposal considerations

Disposal instructions Dispose in accordance with applicable federal, state, and local regulations.

Local disposal regulations Dispose of in accordance with local regulations.

Hazardous waste code Waste codes should be assigned by the user based on the application for which the product was used.

Waste from residues / unused products Dispose in accordance with all applicable regulations.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Section 14 - Transport information

DOT

UN number UN1824

Proper shipping name SODIUM HYDROXIDE SOLUTION

Transport hazard class(es) 8

Packing group II

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Special provisions B2, IB2, N34, T7, TP2

Packaging exemption 154

Packaging non bulk 202

Packaging bulk 242

IATA

UN number UN1824

UN proper shipping name SODIUM HYDROXIDE SOLUTION

Transport hazard class(es) 8

Packaging group II

Environmental hazards No.

ERG Code 8L

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Other Information

IMDG

UN number UN1824

UN proper shipping name SODIUM HYDROXIDE SOLUTION

Transport hazard class(es) 8

Packaging group II

Environmental hazards No.

Marine pollutant

EmS F-A, S-B

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transportation in bulk according to Annex II of MARPOL 73/78 and IBC Code This substance/mixture is not intended to be transported in bulk.

Section 15 - Regulatory Information

US federal regulations 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 CFR707, Subpt. D) Not regulated.

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

CERCLA Hazardous Substance List (40 CFR 302.4

Components	Result
Sodium Hydroxide (CAS 1310-73-2)	LISTED
Sodium dodecylbenzenesulfonate (CAS 25155-30-0)	LISTED
2-Butoxyethanol (CAS 111-76-2)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

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

SARA 302 Extremely hazardous substance Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Chemical name	CAS #	% by wt.
2-Butoxyethanol	111-76-2	5 - 10

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HSPs) 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.

Food and Drug Administration (FDA) Not regulated.

US state regulations

US.Massachusetts RTK - Substance List
Components
2-Butoxyethanol (CAS 111-76-2)
Sodium Hydroxide (CAS 1310-73-2)
Sodium dodecylbenzenesulfonate (CAS 25155-30-0)

US.New Jersey Worker and Community Right-to-Know Act
Components
2-Butoxyethanol (CAS 111-76-2)
Sodium Hydroxide (CAS 1310-73-2)
Sodium dodecylbenzenesulfonate (CAS 25155-30-0)

US.Pennsylvania RTK - Hazardous Substances
Components
2-Butoxyethanol (CAS 111-76-2)
Sodium Hydroxide (CAS 1310-73-2)
Sodium dodecylbenzenesulfonate (CAS 25155-30-0)

US.Rhode Island RTK
Components
2-Butoxyethanol (CAS 111-76-2)
Sodium Hydroxide (CAS 1310-73-2)
Sodium dodecylbenzenesulfonate (CAS 25155-30-0)

US - California Proposition 65
California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to expose you to any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory Name	On Inventory (yes/no)*
Australia	**Australian Inventory of Chemical Substances (AICS)**	No
Canada	**Domestic Substances List (DSL)**	No
Canada	**Non-Domestic Substances List (NDSL)**	No
China	**Inventory of Existing Chemical Substances in China (IECSC)**	Yes
Europe	**European Inventory of Existing Commercial Chemical Substances (EINECS)**	No
Europe	**European List of Notifed Chemical Substances (ELINCS)**	No
Japan	**Inventory of Existing and New Chemical Substances (ENCS)**	No
Korea	**Existing Chemicals List (ECL)**	No
New Zealand	**New Zealand Inventory**	Yes
Philippines	**Philippine Inventory of Chemicals and Chemical Substances**	Yes
Unites States Puerto Rico	**Toxic Substances Control Act (TSCA) Inventory**	No

***A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).**
***A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).**

Section 16 - Other information, including date of preparation or last version

Revision date	1/17/2018
Version #	02
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