

Section 1 - Identification

Product Name: Formula 220 (1954)

Algonquin Products
29 Russells Mill Road
Dartmouth, MA 02748
770-578-4240

Emergency Phone: 800-535-5053

Product Use: Concentrated Low Foam Hard Surface Cleaner

Section 2 - Hazards Identification

GHS Ratings:

Flammable liquid	4	Flash point $\geq 60^{\circ}\text{C}$ (140°F) and $\leq 93^{\circ}\text{C}$ (200°F)
Skin corrosive	2	Reversible adverse effects in dermal tissue, Draize score: $\geq 2.3 < 4.0$ or persistent inflammation
Eye corrosive	1	Serious eye damage: Irreversible damage 21 days after exposure, Draize score: Corneal opacity ≥ 3 , Iritis > 1.5

GHS Hazards

H227	Combustible liquid
H315	Causes skin irritation
H318	Causes serious eye damage

GHS Precautions

P210	Keep away from heat/sparks/open flames/hot surfaces – No smoking
P235	Keep cool
P264	Wash hands thoroughly after handling
P280	Wear protective gloves/protective clothing/eye protection/face protection
P310	Immediately call a POISON CENTER or doctor/physician if you feel unwell after exposure of this product.
P321	Specific treatment (see First Aid below or label)
P362	Take off contaminated clothing and wash before reuse
P302+P352	IF ON SKIN: Wash with soap and water
P305+P351+P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
P332+P313	If skin irritation occurs: Get medical advice/attention
P370+P378	In case of fire: Use Section 5 recommendations for extinction
P403+P235	Store in a well ventilated place. Keep cool
P501	Dispose of contents/container in conformance with State, Local, and Federal regulations.

Signal Word: Danger



Section 3 - Composition, Information on Ingredients

Chemical Name	CAS number	Weight Concentration %
2-butoxyethanol	111-76-2	5.00% - 10.00%
Xylenesulfonic acid sodium salt	1300-72-7	1.00% - 5.00%
Disodium oxosilanediolate	6834-92-0	1.00% - 5.00%
Triphosphoric acid, sodium salt (1:5)	7758-29-4	1.00% - 5.00%
Nonylphenol, ethoxylated	127087-87-0-4	1.00% - 5.00%
Nonylphenol, ethoxylated	127087-87-0-9	1.00% - 5.00%

Section 4 - First Aid Measures

INHALATION: If inhalation of mists, vapors, or spray occurs and adverse effects result, remove to uncontaminated area. Evaluate ABC's (is Airway constricted, is Breathing occurring, and is blood Circulating) and treat symptomatically. GET MEDICAL ATTENTION IMMEDIATELY. There is no specific antidote, treat symptomatically.

EYE CONTACT: Immediately flush contaminated eyes with a directed stream of water for as long as possible. Remove contact lenses, if present and easy to do. Continue rinsing. GET MEDICAL ATTENTION IMMEDIATELY. Washing eyes within several seconds is essential to achieve maximum effectiveness.

SKIN CONTACT: Immediately flush contaminated areas with water. Remove contaminated clothing, jewelry, and shoes immediately. Wash contaminated areas with large amounts of water. GET MEDICAL ATTENTION IMMEDIATELY. Thoroughly clean and dry contaminated clothing before reuse. Discard contaminated leather goods.

INGESTION: If swallowed, do not induce vomiting. For definite or probable ingestion, do not administer oral fluids. If vomiting occurs spontaneously, keep airway clear. Monitor airway. Volume resuscitation (IV fluids) and circulatory support (CPR) may be required. Never give anything by mouth to an unconscious or convulsive person. GET MEDICAL ATTENTION IMMEDIATELY.

Notes to Physician: Medical observation and assessment is recommended for all ingestions, all eye exposures, and symptomatic inhalation and dermal exposures. For symptomatic ingestion, do not administer oral fluids and consider investigation by endoscopy, X-ray, or CT scan. Esophageal perforation, airway compromise, hypotension, and shock are possible. For prolonged exposures and significant exposures, consider delayed injury to exposed tissues. There is no antidote. Treatment is supportive care. Follow normal parameters for airway, breathing, and circulation. Surgical intervention may be required.

Section 5 - Fire Fighting Measures

Flash Point: 66 C (151 F)

LEL:

UEL:

Fire Hazard: Negligible fire hazard.

Flash point: Not flammable

Extinguishing Media: Use extinguishing agents appropriate for surrounding fire.

Sensitivity to Mechanical Impact: Not sensitive. **Sensitivity to Static Discharge:** Not sensitive. **GHS:Physical Hazards:** - Corrosive to Metals

Hazardous Decomposition:
Toxic Vapors of Sodium Oxide

Fire Fighting: Move container from fire area if it can be done without risk. Cool containers with water. Avoid contact with skin. Do not apply water directly on this product. Heat is generated when mixed with water. Wear NIOSH

Section 6 - Accidental Release Measures

Personal Precautions: Do not get in eyes, on skin or on clothing. Avoid breathing mist, vapor, or spray. Do not ingest. Wear appropriate personal protective equipment recommended in Section 8 of the SDS.

Methods and Materials for Containment and Cleaning Up: In case of spill or leak, stop the leak as soon as possible, if safe to do so. Completely contain spilled materials with dikes, sandbags, etc. Shovel dry material into suitable container. Liquid material may be removed with a vacuum truck. Remaining material may be diluted with water and neutralized with dilute acid, then absorbed and collected. Flush spill area with water, if appropriate.

Environmental Precautions: Keep out of water supplies and sewers. Do not flush into surface water or sanitary sewer system. This material is alkaline and may raise the pH of surface waters with low buffering capacity. Releases should be reported, if required, to appropriate agencies.

Section 7 - Handling & Storage

Handling Procedures: Avoid breathing vapor or mist. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Do not ingest. Do not eat, drink or smoke in areas where this material is used. Wear personal protective equipment as described in Exposure Controls/Personal Protection (Section 8) of the SDS. NEVER add water to product. When mixing, slowly add to water to minimize heat generation and spattering.

Storage Conditions: Store and handle in accordance with all current regulations and standards. Keep container tightly closed and properly labeled. Do not store in aluminum container or use aluminum fittings or transfer lines, as flammable hydrogen gas may be generated. Keep separated from incompatible substances (see Section 10 of SDS).

Section 8 - Exposure Controls/Personal Protection

Chemical Name / CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
2-butoxyethanol 111-76-2	OSHA Z-1 TWA:240 mg/m3 OSHA Z-1 TWA Absorbed via Skin	TWA 20ppm PE: 50 ppm	Not Established
Xylenesulfonic acid sodium salt 1300-72-7	Not Established	Not Established	Not Established
Disodium oxosilanediolate 6834-92-0	Not Established	Not Established	Not Established
Triphosphoric acid, sodium salt (1:5) 7758-29-4	TWA 15mg/m3 total dust TWA 5mg/m3 respirable dust as Particulates not otherwise classified (PNOC)	Not Established	Not Established
Nonylphenol, ethoxylated 127087-87-0-4	Not Established	Not Established	Not Established
Nonylphenol, ethoxylated 127087-87-0-9	Not Established	Not Established	Not Established

ENGINEERING CONTROLS:

Provide local exhaust ventilation where dust or mist may be generated. Ensure compliance with applicable exposure limits.

Respiratory Protection: An approved respirator with N95 (dust, fume, mist) cartridges may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure. If eye irritation occurs, a full face style mask should be used. A respiratory protection program that meets applicable regulatory requirements must be followed whenever

workplace conditions
warrant use of a respirator.

PERSONAL PROTECTIVE EQUIPMENT:

Eye Protection: Wear chemical safety goggles with a faceshield to protect against eye and skin contact when appropriate. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin and Body Protection: Wear chemical resistant clothing and rubber boots when potential for contact with the material exists. Contaminated clothing should be removed, then discarded or laundered.

Hand Protection: Wear appropriate chemical resistant gloves

Protective Material Types: Natural rubber, Neoprene, Nitrile, Polyvinyl chloride (PVC), Tyvek, Tychem .

Respiratory Protection: A NIOSH approved respirator with N95 (dust, fume, mist) cartridges may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure. If eye irritation occurs, a full face style mask should be used. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

HYGIENE MEASURES: Handle in accordance with good industrial hygiene and safety practices. Wash hands and affected skin immediately after handling, before breaks, and at the end of the workday . When using do not eat or drink. When using do not smoke.

Section 9 - Physical & Chemical Properties

Boiling Point 171 °C Color Red Specific Gravity 1.057 - 1.070 Odor Threshold N/A Boiling Range 212F Evaporation Rate N/A Solubility in Water Complete Flammability N/A Partition coefficient: n- octanol/water N/A Decomposition temperature N/A	Appearance Clear Liquid pH 13 - 14 Odor Lemon Freezing Point 30F Flash Point N/A Vapor Pressure N/A Viscosity <=10 Upper/lower flammability N/A Auto-ignition temperature N/A
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Section 10 - Stability & Reactivity
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Reactivity/ Stability: Stable at normal temperatures and pressures.

Conditions to Avoid: Mixing with acid, or incompatible materials may cause splattering and release of large amounts of heat. Will react with some metals forming flammable hydrogen gas. Carbon monoxide gas may form upon contact with reducing sugars, food and beverage products in enclosed spaces.

STABLE

Incompatibilities:

Strong Oxidizing agents, Strong Acids
None Known

Reactivity

Corrosive action on metals. Reacts with reducing agents. Reacts with alkali (lyes). Reacts with organic substances. Ammonia (NH₃), fluorine, sulfur trioxide (SO₃), phosphorus pentoxide (P₂O₅). Chemical stability No decomposition if used and stored according to specifications. Possibility of hazardous reactions. Reacts with metals forming hydrogen.

Reacts with alkali (lyes). Conditions to avoid To avoid thermal decomposition do not overheat.

Incompatible materials: Alkalis, Metals, Organic materials.

Hazardous Decomposition:

Toxic Vapors of Sodium Oxide

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Aldehydes . Ketones. Organic acids.

None Known

Oxides of Sodium, Oxides of Phosphorus

Hazardous polymerization will occur.

Section 11 - Toxicological Information

Mixture Toxicity

Inhalation Toxicity LC50: 32mg/L

Component Toxicity

111-76-2	2-butoxyethanol Oral LD50: 1,300 mg/kg (Rat) Dermal LD50: 2,000 mg/kg (Rat)
1300-72-7	Xylenesulfonic acid sodium salt Dermal LD50: 2,100 mg/kg (Rabbit)
6834-92-0	Disodium oxosilanediolate Oral LD50: 1,280 mg/kg (RAT) Dermal LD50: 5,000 mg/kg (RAT) Inhalation LC50: 2 g/m ³ (RAT)
7758-29-4	Triphosphoric acid, sodium salt (1:5) Oral LD50: 3,120 mg/kg (Rat) Dermal LD50: 4,640 mg/kg (Rabbit)
127087-87-0-4	Nonylphenol, ethoxylated Oral LD50: 4,300 mg/kg (Rat) Dermal LD50: 2,500 mg/kg (Rabbit) Inhalation LC50: 22 mg/L (Ra)
127087-87-0-9	Nonylphenol, ethoxylated Oral LD50: 3,314 mg/kg (Rat) Dermal LD50: 3,050 mg/kg (Rabbit)

ACUTE TOXICITY:

The severity of the tissue damage is a function of its concentration, the length of tissue contact time, and local tissue conditions. After exposure there may be a time delay before irritation and other effects occur . This material is a strong irritant and is corrosive to the skin, eyes, and mucous membranes. This material may cause severe burns and permanent damage to any tissue with which it comes into contact. Inhalation will cause severe irritation, possible burns with pulmonary edema, which may lead to pneumonitis. Skin contact with this material may cause severe irritation and corrosion of tissue. Repeated exposure may cause dermatitis. Eye contact can cause severe irritation, corrosion with possible corneal damage and blindness. Ingestion may cause irritation, corrosion/ulceration, nausea, and vomiting.

CARCINOGENICITY: This product is not classified as a carcinogen by NTP, IARC or OSHA.

CAS Number

Description

% Weight

Carcinogen Rating

Section 12 - Ecological Information
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ECOTOXICITY DATA:

Aquatic Toxicity: This material has exhibited moderate toxicity to aquatic organisms. Data provided are for sodium hydroxide.

Fish Toxicity:

LC50 Brook trout: 25 ppm/ 24 hr

LC50 King salmon: 48 ppm

Invertebrate Toxicity:

LC50 Daphnia magna: 100 ppm

LC50 Shrimp: 33 - 100 ppm/48 hr

LC50 Cockle: 330 - 1000 ppm/48 hr

FATE AND TRANSPORT:

BIODEGRADATION: This material is inorganic and not subject to biodegradation.

PERSISTENCE: This material is alkaline and may raise the pH of surface waters with low buffering capacity . This material is believed to exist in the disassociated state in the environment.

BIOCONCENTRATION: This material is not expected to bioconcentrate in oganisms.

ADDITIONAL ECOLOGICAL INFORMATION: This material has exhibited slight toxicity to terrestrial organisms.

Component Ecotoxicity

Section 13 - Disposal Considerations

Waste from material: Reuse or reprocess, if possible. Dispose in accordance with all applicable regulations. May be subject to disposal regulations: U.S. EPA 40 CFR 261. Hazardous Waste Number(s): D002.

Section 14 - Transportation Information

<u>Agency</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT	COMPOUND, CLEANING, LIQUID (not regulated by DOT / IMO)			

Section 15 - Regulatory Information

- None

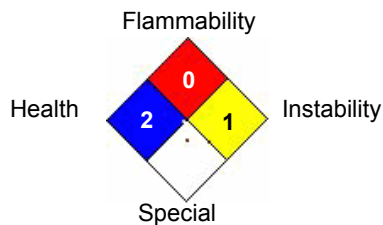
Section 16 - Other Information

Hazardous Material Information System (HMIS)

HEALTH	<input type="text" value="2"/>
FLAMMABILITY	<input type="text" value="0"/>
PHYSICAL HAZARD	<input type="text" value="1"/>
PERSONAL PROTECTION	<input type="text" value="C"/>

HMIS & NFPA Hazard Rating Legend
 * = Chronic Health Hazard
 0 = INSIGNIFICANT
 1 = SLIGHT
 2 = MODERATE
 3 = HIGH

National Fire Protection Association (NFPA)



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