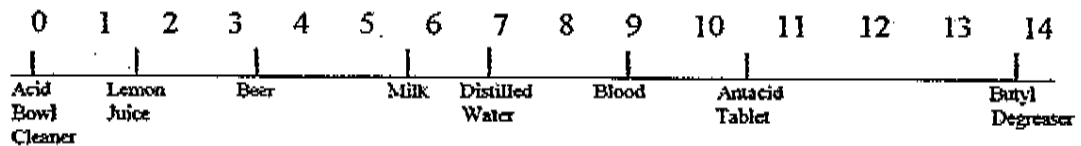


TECH TIP

Understanding pH



What is pH?

pH is a unit of measurement used to measure the acidity or alkalinity of a solution. If you have ever had acid-indigestion, then you already know why proper pH balance is very important.

Most soil is acidic in nature because it is a combination of dirt, dust and/or oily substances. Neutralizing this type of soil with an alkaline cleaner is the best way to remove it. The degree of alkalinity required will depend upon the soil composition and buildup. Conversely, alkaline substances, such as lime, scale, rust, and hard water deposits require an acid product for cleaning.

The pH scale is a logarithmic scale. Going from one unit to the next increases/decreases the strength by ten times. A pH of 8 is ten times that of 7 (neutral), a pH of 9 is 100 times, a pH of 10 is 1,000 times, and so on.

There are considerations other than pH when evaluating a cleaning product such as total active ingredients, presence of solvents, surfactants, and builders. While pH will give you a good yardstick for comparing cleaning products, it is by no means the only measurement.

MATERIAL SAFETY DATA SHEET

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY INFORMATION

CEILING PRO INTERNATIONAL
7456 Washington Avenue South
Eden Prairie, MN 55344

EMERGENCY TELEPHONE NUMBER
1-800-424-9300 CHEMTREC
TELEPHONE NUMBER FOR INFORMATION
(952) 947-0007

PRODUCT INFORMATION

PRODUCT NUMBER:
PRODUCT NAME: **PRO A**
REGISTERED TRADE NAME: **PRO A**
PRODUCT DESCRIPTION: **Mild Alkaline/Solvent Cleaner**

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Unlisted ingredients are not "hazardous" per Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200) and/or are not found on the Canadian Workplace Hazardous Materials Information System ingredient disclosure list. See Section 8 for any additional exposure limit guidelines.

Chemical Name	CAS#	Percent	OSHA PEL
2-Butoxyethanol	111-76-2	2-5	TWA (as 2-Butoxyethanol) 50 ppm(skin)
Sodium Metasilicate	6837-92-0	0.5-3	None Established - Recommended Ceiling 2 mg/m3 Respirable Dust

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS RATING: - HEALTH 1 - FLAMMABILITY 0, - REACTIVITY 0
See SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION for personal protective equipment recommendations.

POTENTIAL HEALTH EFFECTS BY ROUT OF ENTRY

EYE: Can cause burns. Symptoms include stinging, tearing, redness, and swelling of the eyes. Can injure the cornea and cause blindness.

SKIN: Can cause permanent skin damage.

INHALATION: It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing this material may be harmful. Symptoms usually occur at air concentrations higher than the recommended exposure limits (See Section 8).

INGESTION: Swallowing this material may be harmful or fatal. Symptoms may include severe stomach and intestinal irritation (nausea, vomiting, diarrhea), abdominal pain, and vomiting of blood. Swallowing this material may cause burns and destroy tissue in the mouth, throat, and digestive tract. Low blood pressure and shock may occur as a result of severe tissue injury.

LONG TERM (CHRONIC) EFFECTS

Target Organs: No Data

Developmental Information: This material (or a component) has been shown to cause harm to the fetus in laboratory animals studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.

Cancer Information: These materials (or its components) are not listed as a carcinogen by the International Agency for Research on Cancer, the National Toxicology Program, or the Occupational Safety and Health Administration. 2-Butoxyethanol has been shown to cause cancer in laboratory animals. The relevance of these findings to humans is uncertain.

Other Health Effects: No Data

Primary Routes of Entry: Inhalation, Skin Absorption, Skin Contact, Eye Contact, Ingestion

SECTION 4 - FIRST AID MEASURES

IF IN EYES: If material gets into the eyes, immediately flush eyes gently with water for at least 20 minutes while holding eyelids apart. If symptoms develop as a result of vapor exposure, immediately move individual away from exposure and into fresh air before flushing as recommended above. Seek immediate medical attention.

IF ON SKIN: Immediately flush skin with water for at least 20 minutes while removing contaminated clothing and shoes. Seek immediate medical attention. Wash clothing before reuse and discard contaminated shoes.

IF SWALLOWED: Seek immediate medical attention. Do not induce vomiting. Vomiting will cause further damage to the mouth and throat. If individual is conscious and alert, immediately rinse mouth with water and give milk or water to drink. If possible do not leave individual unattended.

IF INHALED: If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

NOTE TO PHYSICIANS: Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material skin, lung (for example, asthma-like conditions), eye, liver, and kidneys.

SECTION 5 - FIRE FIGHTING MEASURES

NA = NOT APPLICABLE

NE = NOT ESTABLISHED

FLASH POINT (METHOD): NON-FLAMMABLE (TCC ASTM D-56)

AUTOIGNITION TEMPERATURE: NE

EXPLOSIVE LIMITS: LEL = NE UEL = NE

FIRE AND EXPLOSION HAZARDS: No special fire hazards are known to be associated with this product. Product is NON-FLAMMABLE.

EXTINGUISHING MEDIA: CO₂, Foam, Dry Chemical

SPECIAL FIRE FIGHTING PROCEDURES: Use self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

EXPLOSION DATA: Not sensitive to impact or electrical discharge.

FIRE FIGHTING INSTRUCTIONS: No special precautions necessary when fighting fires involving this product.

HAZARDOUS PRODUCTS OF COMBUSTION: May form carbon dioxide and carbon monoxide.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Persons not wearing proper protective equipment should be excluded from area of spill. Comply with all applicable Federal, State, and Local regulations. Dike if necessary, contain spill with inert absorbents and transfer to containers for disposal. Keep spilled material out of sewers, watersheds, or water systems.

LARGE SPILL: Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal. Per good environmental management practices, prevent run-off to sewers, streams and other bodies of water. Stop spill at the source. Cover sewer grates and dike the spill. Absorb spilled material on to absorbents. Shovel materials into container. Close container tightly and dispose of properly.

SECTION 7 - HANDLING AND STORAGE

HANDLING: Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Warning. Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "auto ignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions.

STORAGE: Store in a cool, dry place.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION: Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

SKIN PROTECTION: Wear resistant gloves such as: natural rubber, neoprene, nitrile rubber. To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

RESPIRATORY PROTECTION: If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

ENGINEERING CONTROLS: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

EXPOSURE LIMITS

Chemical name	ACGIH Exposure Limits	OSHA PEL
2-Butoxyethanol	20 ppm - TWA(Skin)	50 ppm - TWA(Skin)
Sodium Metasilicate	Not Established	Not Established

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Clear Liquid; Solvent Odor

ODOR THRESHOLD: Not Established

SPECIFIC GRAVITY: 1.016 ± 0.01

WEIGHT PER GALLON (lbs): 8.47

SOLUBILITY IN WATER: Complete and instant.

BOILING POINT: > 212° F.

FREEZE/MELTING POINT: 32°F

VAPOR PRESSURE: Not Established

VAPOR DENSITY: Not Established

EVAPORATION RATE: (n-Butyl Acetate = 1): < 1.00

pH(1%): 10.0

SECTION 10 - STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions.

CHEMICAL INCOMPATIBILITIES: Avoid contact with strong acids, heat, and strong oxidizers.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION: May form: carbon monoxide and carbon dioxide.

SECTION 11 - TOXICOLOGICAL INFORMATION

Chemical Name	LD50/LC50
2-Butoxyethanol	Oral LD50 for Rats is 470mg/kg Skin LD50 in Rabbits is 220mg/kg
Sodium Metasilicate	Oral LD50 in Rats is 1280mg/kg

SECTION 12 - ECOLOGICAL INFORMATION

ECOTOXICAL INFORMATION: Ecotoxicity of 2-Butoxyethanol to Micro-organisms: Bacterial/NA IC50 >5000mg/l; Ecotoxicity of 2-Butoxyethanol to Aquatic Invertebrates: Daphnia LC50 48h >1000mg/l. Ecotoxicity of 2-Butoxyethano to Fish: Fathead Minnow LC50 96h 1700mg/l.

Theoretical COD of 2-Butoxyethanol is 2.3. Theoretical 10 Day BOD of 2-Butoxyethanol is 57%. Material is readily biodegradable.

MATERIAL SAFETY DATA SHEET

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY INFORMATION

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7456 Washington Avenue South
Eden Prairie, MN 55344

EMERGENCY TELEPHONE NUMBER
1-800-424-9300 CHEMTREC
TELEPHONE NUMBER FOR INFORMATION
(952) 947-0007

PRODUCT INFORMATION

PRODUCT NUMBER:

PRODUCT NAME:

REGISTERED TRADE NAME:

PRODUCT DESCRIPTION:

PRO B

PRO B

Organic Bleaching Agent/Cleaner

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Unlisted ingredients are not "hazardous" per Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200) and/or are not found on the Canadian Workplace Hazardous Materials Information System ingredient disclosure list. See Section 8 for any additional exposure limit guidelines.

Chemical Name	CAS#	Percent	OSHA PEL
Hydrogen Peroxide	7722-84-1	15-20	TWA (as Hydrogen Peroxide) 1 ppm

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMS RATING:-- HEALTH 1 ~ FLAMMABILITY 0, -- REACTIVITY 0

See SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION for personal protective equipment recommendations.

POTENTIAL HEALTH EFFECTS BY ROUTE OF ENTRY

EYE: Corrosive. May cause burns resulting in permanent damage, May cause severe conjunctivitis, cornea injury, or irreversible damage to the eyes. Symptoms may occur with delay.

SKIN: Corrosive, May cause buy-as resulting in permanent damage. Prolonged exposure may cause severe irritation and white discoloration, Burning may result in localized erythema (redness) or even blistering of the skin

INHALATION: Inhalation of vapors or aerosols are severely irritating to the respiratory tract and may cause inflammation and pulmonary edema, Symptoms may occur with delay. (See Section 8).

INGESTION: Ingestion of high concentrations causes rapid release of oxygen which may expand the esophagus or stomach resulting in severe damage (bleeding, ulceration or perforation). Expected to cause burns to the gastrointestinal tract, Aspiration of material into the lungs can cause damage.

LONG TERM (CHRONIC) EFFECTS

Target Organs: No Data

Developmental Information:

Other Health Effects:

Primary Routes of Entry: Inhalation, Skin Absorption, Skin Contact, Eye Contact, Ingestion

SECTION 4 - FIRST AID MEASURES

IF IN EYES: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes or until all material has been removed. Obtain medical attention without delay, preferably from an ophthalmologist.

IF ON SKIN: Flush skin immediately with plenty of water. Remove contaminated clothing. Obtain medical attention immediately.

IF SWALLOWED: If swallowed, do not induce vomiting. Have victim drink 8-10 ounces of water to dilute material in stomach. Get medical attention immediately. Never give anything by mouth to an unconscious person.

IF INHALED If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If unconscious, evaluate the need for artificial respiration. Get immediate medical attention.

NOTE TO PHYSICIANS: Hydrogen peroxide at these concentrations is a strong oxidant. Direct contact with the eyes likely to cause corneal damage especially if not washed immediately. Careful ophthalmologic evaluation is recommended and the possibility of local corticosteroid therapy should be considered. Because of the likelihood of corrosive effect on the gastrointestinal tract after ingestion, and the unlikelihood of systemic effects, attempts at evacuating the stomach via emesis induction or gastric lavage should be avoided. There is a remote possibility, however, that a nasogastric or orogastric tube may be required for the reduction of severe distension due to gas formation.

SECTION 5 - FIRE FIGHTING MEASURES

NA - NOT APPLICABLE

NE - NOT ESTABLISHED

FLASH POINT (METHOD): NON-FLAMMABLE (TCC ASTM D-56)

AUTOIGNITION TEMPERATURE: NE

EXPLOSIVE LIMITS: LEL = NE UEL = NE

FIRE AND EXPLOSION HAZARDS: No special fire hazards are known to be associated with this product. Product is NON-FLAMMABLE.

EXTINGUISHING MEDIA: Do NOT use CO₂ extinguisher on this material: use only water spray or appropriate foam. Do not use organic compounds on this material.

SPECIAL FIRE FIGHTING PROCEDURES: Use self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Strong oxidizer. Contact with combustible materials may cause a fire. Release of oxygen may support

combustion. Contact with incompatible materials (e.g. metals, alkalis, and reducing agents) will cause hazardous decomposition resulting in the release of large quantities of heat, steam, and oxygen gas. Exposure to heat may cause, hazardous decomposition, Lower Explosive Limit; Hydrogen Peroxide vapors >40% by weight (or 26%mol).

EXPLOSION DATA: Not sensitive to impact or electrical discharge.

FIRE FIGHTING INSTRUCTIONS: Evacuate area, and fight fire from a safe distance. As in any fire, wear self-contained positive-pressure breathing apparatus, (MSHA/NOSH approved or equivalent) and full protective gear. Containers can build up pressure if exposed to heat (fire), cool with water spray.

HAZARDOUS PRODUCTS OF COMBUSTION: May form carbon dioxide and carbon monoxide.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Steps to be taken in Case Material Is Released or Spilled: Never return spilled product into its original container. Never put spilled material into another container for disposal. Dilute with large amounts of water to a concentration of about 5% hydrogen peroxide; hold in diked area or pond until peroxide is completely decomposed or dispose of according to all relevant local, provincial, and federal, laws and regulations. Ventilate area. Use personal protective equipment as described in section 8. Contact supplier for recommendations to decompose dilute peroxide (5%), if necessary.

SPONTANEOUS COMBUSTION HAZARD: Combustible materials exposed to hydrogen peroxide should be immediately submerged in or rinsed with large amounts of water to ensure that all hydrogen peroxide is removed. Residual hydrogen peroxide that is allowed to dry (upon evaporation hydrogen peroxide can concentrate) on organic materials such as paper, fabrics, cotton, leather, wood, or other combustibles, can cause the material to ignite and result in a fire.

SECTION 7 - HANDLING AND STORAGE

HANDLING: Handling: Wash thoroughly after handling. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing vapor or mist. Avoid contact with eyes, skin, and clothing. Never use pressure to empty a container

STORAGE: Do not store near combustible material. Store in a cool, dry place. Keep container closed when not in use. Recommended container materials: Polyvinyl chloride (rigid PVC), Polyethylene, Polypropylene. Use adequate venting devices on all packages, containers and tanks and check correct operation periodically.

Do not confine product in un-vented vessels or between closed valves. Risk of overpressure and bursting due to decomposition in confined spaces and pipes. Polytetrafluoroethylene (PTFE), Vanadium Steel: 316 stainless steel, passivated, Aluminum >99.5%, passivated, Aluminum Magnesium Alloys, passivated. Consult appropriate authorities regarding storage requirements for liquid oxidizers, e.g, NFPA 430.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION: Chemical splash goggles and face shield in compliance with OSHA regulations are advised. Goggles should secure independent of the face shield and or hard hat. Consult your safety representative.

SKIN PROTECTION: Wear resistant gloves such as: neoprene or rubber. Tyvek or PVC full chemical splash suit. Vinyl, PVC, or rubber boots.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

ENGINEERING CONTROLS: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

EXPOSURE LIMITS

Chemical name	ACGIH Exposure Limits	OSHA PEL
Hydrogen Peroxide	1.4 mg/m ³ - TWA	1.4 mg/m ³ - TWA

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Clear Colorless Liquid; Pungent Odor

ODOR THRESHOLD: Not Established

SPECIFIC GRAVITY: 1.066 ± 0.01

WEIGHT PER GALLON (lbs): 8.88

SOLUBILITY IN WATER: Complete and instant.

BOILING POINT: 104-119° C.

FREEZE/MELTING POINT: 32°F

VAPOR PRESSURE: Not Established

VAPOR DENSITY: Not Established

EVAPORATION RATE: (n-Butyl Acetate = 1): > 1.00

pH(1%): 8.3

SECTION 10 - STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions.

CONDITIONS TO AVOID: Avoid high Temperatures, Contamination.

SPONTANEOUS COMBUSTION HAZARD: Combustible materials exposed to hydrogen peroxide should be immediately submerged in or rinsed with large amounts of water to ensure that all hydrogen peroxide is removed. Residual hydrogen peroxide that is allowed to dry (upon evaporation hydrogen peroxide can concentrate) on organic materials such as paper, fabrics, cotton, leather, wood, or other combustibles, can cause the material to ignite and result in a fire.

CHEMICAL INCOMPATIBILITIES: Avoid contact with metals, reducing agents, alkalis, combustible materials, organic materials, salts of heavy metals, impurities.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION: May form: oxygen, steam.

SECTION 11 - TOXICOLOGICAL INFORMATION

Hydrogen Peroxide Toxicological Information:

Oral LD50 (rat): 800mg/kg (70%H₂O₂)

Dermal LD50 (rabbit): >6500mg/kg(70%H₂O₂)

Supplementary Information:

PRIMARY IRRITATIVE EFFECT

Primary irritative effect to skin:

Strongly corrosive, rabbit, literature, (test substance: Hydrogen peroxide 70%)

Primary irritative effect to eyes:

Corrosive, rabbit, literature, (test substance: Hydrogen peroxide 70%)

SENSITIZATION

Sensitization: not sensitizing, guinea pig.

GENOTOXICITY

Genotoxicity, in-vitro: In-vitro experiments (micro-organisms, cell cultures) have proved mutagenic/genotoxic effects, literature. In the presence of metabolic systems no mutagenic effects were observed.

Genotoxicity, in-vivo:

Micronucleus test, mouse, intraperitoneal (i.p.), negative, OECD 474.

Micronucleus test, mouse, oral, negative, literature.

Unscheduled DNA synthesis test (UDS): rat, negative, literature.

SUBACUTE TO CHRONIC TOXICITY

Chronic toxicity: Drinking water study, mouse (male and female), duration: 90 days; follow-up (recovery): 6 weeks; Effects/target organs: body weight development negative, irritation to gastrointestinal tract; OECD 408.

Carcinogenic effect:

Clues to possible carcinogenic effects in animal experiments: Up to date there is no evidence of increased tumor risk.

Hydrogen peroxide is not a carcinogenic substance according to MAK, IARC, NTP, OSHA, ACGIH.

SECTION 12 – ECOLOGICAL INFORMATION

Aquatic Toxicity Data

LC50(Fish): 37.4 mg/l(96h)

EC10(Bacteria): 11 mg/l(16h)

EC50(Daphnia): 7.7 mg/l(24h)

Supplementary Information:

DATA ON ELIMINATION (persistence and degradability)

Hydrolysis; medium: water.

Half-life(t 1/2) hours to days.

Hydrolysis; medium: soil.

Half-life (t 1/2) minutes to hours.

Hydrolysis; medium: air.

Photochemical degradation to 50% within approx. 20 hours.

BEHAVIOR IN ENVIRONMENTAL FIELDS

Under ambient conditions quick hydrolysis, reduction or decomposition occurs.

The following substances are formed: oxygen and water,

MOBILITY AND BIOACCUMULATION POTENTIAL

Bioaccumulation: none,

Hydrogen peroxide quickly decomposes to, oxygen and water,

ECO-TOXIC EFFECTS

Aquatic toxicity

Fish toxicity:

Acute fish toxicity; LC 50 (96h) = 37.4 mg/l, *Ictalurus punctatus*, literature

Acute fish toxicity; LC 0 (96h) = 17 mg/l, *Ictalurus punctatus*, literature

Acute fish toxicity; LC 50 (24h) 31.3 mg/l, *Oncorhynchus mykiss*, literature.

Toxicity to crustaceans:

Acute toxicity to crustaceans: EC 50 (24h) = 7.7 mg/l, *Daphnia magna*, literature,

Acute toxicity to crustaceans: EC 0 (24h) = 3.8 mg/l *Daphnia magna*.

Toxicity to algae:

Chronic algae toxicity: IC 50 (72h) = 2.5 mg/l, *Chlorella vulgaris*, OECD 201.

Chronic algae toxicity: NOEC(72h) = 0.1 mg/l, *Chlorella vulgaris*, OECD 201.

Chronic algae toxicity: IC 94 (48h) = 1.7 mg/l, blue-green algae, literature.

(all data related to: Hydrogen peroxide 100%)

Behavior in water treatment plants

Hydrogen peroxide quickly decomposes to oxygen and water.

Toxic to molluscs: Moderate.

Molluscs, LD50(96h) = 17.5 mg/l (physa spec.)

Molluscs, LC30(56h) = 5 mg/l (*Dreissena polymorpha*)

Toxic to water plants: moderate
 Water plants, EC80(7days) = 34 mg/l

FURTHER ECOLOGICAL INFORMATION

AOX information

The product does not contain any organically bonded halogen.

In accordance with the regulations on preparation, contains following heavy metals and compounds from EC directive No. 76/464
 Arsenic, lead and cadmium compounds, organic compounds, organic halogen compounds): none

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal Method:

The appropriate regulatory agencies should be contacted prior to disposal.

SECTION 14 - TRANSPORTATION INFORMATION

DOT Proper Shipping Name: Hydrogen Peroxide Aqueous Solution
 DOT Hazard Class: 5.1
 Packing Group: II
 UN Number: UN2014
 DOT Labels: Primary: OXIDIZER Subsidiary: CORROSIVE
 DOT Placards: OXIDIZER
 CERCLA Reportable Quantity: NA
 Marine Pollutant: No
 DOT Emergency Response Guidebook Number: 140

SECTION 15- REGULATORY INFORMATION

This product contains the following non-hazardous components:

	CAS Number
Water	007732-18-5

U.S. Federal Regulations

OSHA:

This document has been prepared in accordance with the MSDS requirements of the OSHA Hazard Communication Standard.

Clean Air Act Section 112:

This product contains the following components present at or above the OSHA de minimus level and listed as Hazardous Air Pollutants: **None**

This product contains the following components present at or above the OSHA de minimus level and listed as Extremely Hazardous Air Pollutants: **None**

SARA Section 302:

This product contains the following components listed as Extremely Hazardous Substances: **None**

SARA Section 311/312

Hazard Classifications: Immediate (acute)

SARA Section 313: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372: **None**

TSCA: This product or its components are listed in or exempt from the TSCA inventory requirements.

This product contains the following non-proprietary substances subject to export notification under Section 12(b) of TSCA: **None**

State Regulations

New Jersey:

This product contains the following non-hazardous components subject to disclosure under New Jersey Right-To-Know legislation:

	CAS Number
Water	007732-18-5

Pennsylvania:

This product contains the following non-hazardous components subject to disclosure under Pennsylvania Right-to-Know legislation:

	CAS Number
Water	007732-18-5

California (Proposition 65): This product contains the following substances known to the State of California to Cause Cancer: **None**

This product contains the following substances known to the State of California to cause adverse reproductive effects: **None**

International Regulations:

Summary of International Chemical Inventory Status:

Canada	On inventory
Europe	On inventory

1070-3

South Korea

Australia

On inventory

On inventory

Pro B

Additional International Regulatory Information:

Canadian Regulations

WHMIS (Workplace Hazardous Material Information System):

Hazard Classification: Class C (Oxidizer), Class D, Div. 2, Subdiv. B.

Class E (Corrosive)

Product Identification No. 2014

Ingredient Disclosure List: Listed

SECTION 16 - ADDITIONAL INFORMATION

This Material Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29CFR1910.1200) and the Canadian Workplace Hazardous Materials Information System (WHMIS).

Prepared By: Steven W. Ernst

Telephone No.: 952-890-1820

Date Prepared: 01/12/05

Revision Number: 1070-3

This information is furnished gratuitously, independent of any sale, and for your independent verification. Although we believe the data to be correct as of the date indicated, we make no representations as to its accuracy and such information may not be valid when product is used in any process or combined with other materials. NO REPRESENTATION(S), GUARANTEE(S), OR WARRANTY, EITHER EXPRESS, IMPLIED OR OF ANY NATURE, is made with respect to the product or data provided.

MATERIAL SAFETY DATA SHEET

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY INFORMATION

CEILING PRO INTERNATIONAL
7456 Washington Avenue South
Eden Prairie, MN 55344

EMERGENCY TELEPHONE NUMBER
1-800-424-9300 CHEMTREC
TELEPHONE NUMBER FOR INFORMATION
(952) 947-0007

PRODUCT INFORMATION

PRODUCT NUMBER:
PRODUCT NAME: **PRO C**
REGISTERED TRADE NAME: **PRO C**
PRODUCT DESCRIPTION: **Alkaline/Solvent Cleaner**

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Unlisted ingredients are not "hazardous" per Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200) and/or are not found on the Canadian Workplace Hazardous Materials Information System ingredient disclosure list. See Section 8 for any additional exposure limit guidelines.

Chemical Name	CAS#	Percent	OSHA PEL
2-Butoxyethanol	111-76-2	2-5	TWA (as 2-Butoxyethanol) 50 ppm(skin)
Potassium Hydroxide	1310-58-3	4-7	Ceiling 2mg/m3

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMS RATING:-- HEALTH 1 - FLAMMABILITY 0, -- REACTIVITY 0

See SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION for personal protective equipment recommendations.

POTENTIAL HEALTH EFFECTS BY ROUT OF ENTRY

EYE: Can cause burns. Symptoms include stinging, tearing, redness, and swelling of the eyes. Can injure the cornea and cause blindness.

SKIN: Can cause permanent skin damage.

INHALATION: It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing this material may be harmful. Symptoms usually occur at air concentrations higher than the recommended exposure limits (See Section 8).

INGESTION: Swallowing this material may be harmful or fatal. Symptoms may include severe stomach and intestinal irritation (nausea, vomiting, diarrhea), abdominal pain, and vomiting of blood. Swallowing this material may cause burns and destroy tissue in the mouth, throat, and digestive tract. Low blood pressure and shock may occur as a result of severe tissue injury.

LONG TERM (CHRONIC) EFFECTS

Target Organs: No Data

Developmental Information: This material (or a component) has been shown to cause harm to the fetus in laboratory animals studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.

Cancer Information: These materials (or its components) are not listed as a carcinogen by the International Agency for Research on Cancer, the National Toxicology Program, or the Occupational Safety and Health Administration. 2-Butoxyethanol has been shown to cause cancer in laboratory animals. The relevance of these findings to humans is uncertain.

Other Health Effects: No Data

Primary Routes of Entry: Inhalation, Skin Absorption, Skin Contact, Eye Contact, Ingestion

SECTION 4 - FIRST AID MEASURES

IF IN EYES: If material gets into the eyes, immediately flush eyes gently with water for at least 20 minutes while holding eyelids apart. If symptoms develop as a result of vapor exposure, immediately move individual away from exposure and into fresh air before flushing as recommended above. Seek immediate medical attention.

IF ON SKIN: Immediately flush skin with water for at least 20 minutes while removing contaminated clothing and shoes. Seek immediate medical attention. Wash clothing before reuse and discard contaminated shoes.

IF SWALLOWED: Seek immediate medical attention. Do not induce vomiting. Vomiting will cause further damage to the mouth and throat. If individual is conscious and alert, immediately rinse mouth with water and give milk or water to drink. If possible do not leave individual unattended.

IF INHALED: If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

NOTE TO PHYSICIANS: Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material skin, lung (for example, asthma-like conditions), eye, liver, and kidneys.

SECTION 5 - FIRE FIGHTING MEASURES

NA = NOT APPLICABLE

NE = NOT ESTABLISHED

FLASH POINT (METHOD): NON-FLAMMABLE (TCC ASTM D-56)

AUTOIGNITION TEMPERATURE: NE

EXPLOSIVE LIMITS: LEL = NE UEL = NE

FIRE AND EXPLOSION HAZARDS: No special fire hazards are known to be associated with this product. Product is NON-FLAMMABLE.

EXTINGUISHING MEDIA: CO₂, Foam, Dry Chemical

SPECIAL FIRE FIGHTING PROCEDURES: Use self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

EXPLOSION DATA: Not sensitive to impact or electrical discharge.

FIRE FIGHTING INSTRUCTIONS: No special precautions necessary when fighting fires involving this product.
HAZARDOUS PRODUCTS OF COMBUSTION: May form carbon dioxide and carbon monoxide.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Persons not wearing proper protective equipment should be excluded from area of spill. Comply with all applicable Federal, State, and Local regulations. Dike if necessary, contain spill with inert absorbents and transfer to containers for disposal. Keep spilled material out of sewers, watersheds, or water systems

LARGE SPILL: Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal. Per good environmental management practices, prevent run-off to sewers, streams and other bodies of water. Stop spill at the source. Cover sewer grates and dike the spill. Absorb spilled material on to absorbents. Shovel materials into container. Close container tightly and dispose of properly.

SECTION 7 - HANDLING AND STORAGE

HANDLING: Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Warning. Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "auto ignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions.

STORAGE: Store in a cool, dry place.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION: Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

SKIN PROTECTION: Wear resistant gloves such as: natural rubber, neoprene, nitrile rubber. To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

RESPIRATORY PROTECTION: If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

ENGINEERING CONTROLS: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

EXPOSURE LIMITS

Chemical name	ACGIH Exposure Limits	OSHA PEL
2-Butoxyethanol	20 ppm - TWA(Skin)	50 ppm - TWA(Skin)
Potassium Hydroxide	2 mg/m ³ Ceiling	2 mg/m ³ Ceiling

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Clear Liquid; Solvent Odor

ODOR THRESHOLD: Not Established

SPECIFIC GRAVITY: 1.026 ± 0.01

WEIGHT PER GALLON (lbs): 8.55

SOLUBILITY IN WATER: Complete and instant.

BOILING POINT: > 212° F.

FREEZE/MELTING POINT: 32°F

VAPOR PRESSURE: Not Established

VAPOR DENSITY: Not Established

EVAPORATION RATE: (n-Butyl Acetate = 1): < 1.00

pH(1%): 10.60

SECTION 10 - STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions.

CHEMICAL INCOMPATIBILITIES: Avoid contact with strong acids, heat, aluminum, copper, bronze, and strong oxidizers.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION: May form: carbon monoxide and carbon dioxide.

SECTION 11 - TOXICOLOGICAL INFORMATION

Chemical Name	LD50/LC50
2-Butoxyethanol	Oral LD50 for Rats is 470mg/kg Skin LD50 in Rabbits is 220mg/kg
Potassium Hydroxide	Oral LD50 in Rats is 363mg/kg

SECTION 12 - ECOLOGICAL INFORMATION

ECOTOXICAL INFORMATION: Ecotoxicity of 2-Butoxyethanol to Micro-organisms: Bacterial/NA IC50 >5000mg/l; Ecotoxicity of 2-Butoxyethanol to Aquatic Invertebrates: Daphnia LC50 48h >1000mg/l. Ecotoxicity of 2-Butoxyethanol to Fish: Fathead Minnow LC50 96h 1700mg/l.

Ecotoxicity of Potassium Hydroxide to Fish: Fathead Minnow LC50 96h 176mg/l. Ecotoxicity of Potassium Hydroxide to Aquatic Invertebrates: Water Flea 50 48h 60mg/l. Ecotoxicity of Potassium Hydroxide to Plants: Green Algae 96 h 61 mg/l.

Theoretical COD of 2-Butoxyethanol is 2.3. Theoretical 10 Day BOD of 2-Butoxyethanol is 57%. Material is readily biodegradable. Potassium Hydroxide is

Inorganic and thus not subject to biodegradation. Potassium Hydroxide does not bioaccumulate in organisms.

SECTION 13 - DISPOSAL CONSIDERATIONS

Do not dump into sewers, on the ground, or into any body of water. All disposal methods must be in compliance with all federal, state/provincial and local laws and regulations. Regulations may vary in different locations. Waste characterization and compliance with applicable laws are the responsibility solely of the waste generator.

SECTION 14 - TRANSPORTATION INFORMATION

DOT Proper Shipping Name: Corrosive Liquid, Basic, Inorganic, N.O.S.
 DOT Hazard Class: 8
 Packing Group: II
 UN Number: UN3266
 DOT Labels: Primary: Corrosive Subsidiary: None
 DOT Placards: Corrosive
 CERCLA Reportable Quantity: 1000 lbs.
 Marine Pollutant: No
 DOT Emergency Response Guidebook Number: 154

SECTION 15 - REGULATORY INFORMATION

Components:	2-Butoxyethanol	Potassium Hydroxide
OSHA		
Target Organs:	Eyes, Skin, Respiratory System	Eyes, Skin, Respiratory System
Carcinogenic Potential:		
Regulated by OSHA:	No	No
Listed on NTP Report:	No	No
IARC Listing:	Not Classifiable as to Carcinogenicity to Humans	
U.S. EPA Requirements		
Release Reporting		
CERCLA(40 CFR 302):		
Listed Substance:	Yes	
Reportable Quantity:	1 lb.	Yes
Category:	NA	1 lb.
RCRA Waste Number:	Not Listed	NA
Unlisted Substances:		Not Listed
Reportable Quantity:	None	
Category:	NA	
RCRA Waste number:	NA	
SARA Title III		
Section 302 & 303(40 CFR 355)		
Listed Substance:	No	No
Reportable Quantity:	NA	NA
Planning Threshold:	NA	NA
Section 311 & 312 (40 CFR 370)		
Hazard Categories (product):		Fire: N Sudden Release of
Pressure: N		Reactive: N Acute
Health: Y		Chronic Health: N
Planning Threshold:	10,000 LBS.	10,000 LBS
Section 313 (40 CFR 372)		
Listed Toxic Chemical:	Yes	Yes
Reporting Threshold:	10,000 lbs.	10,000 lbs.
+		
U.S. TSCA Status		
Listed (40 CFR 710):	Yes	Yes

WHMIS CLASSIFICATION: E

This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the MSDS contains all the information required by the *Controlled Products Regulations*.

SECTION 16 - ADDITIONAL INFORMATION

This Material Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29CFR1910.1200) and the Canadian Workplace Hazardous Materials Information System (WHMIS).

Prepared By: Steven W. Ernst

Telephone No.: 952-890-1820

Date Prepared: 01/12/05

Revision Number: 1071-3

This information is furnished gratuitously, independent of any sale, and for your independent verification. Although we believe the data to be correct as of the date indicated, we make no representations as to its accuracy and such information may not be valid when product is used in any process or combined with other materials. NO REPRESENTATION(S), GUARANTEE(S), OR WARRANTY, EITHER EXPRESS, IMPLIED OR OF ANY NATURE, is made with respect to the product or data provided.

MATERIAL SAFETY DATA SHEET

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY INFORMATION

CEILING PRO INTERNATIONAL
7456 Washington Avenue South
Eden Prairie, MN 55344

EMERGENCY TELEPHONE NUMBER
1-800-424-9300 CHEMTREC
TELEPHONE NUMBER FOR INFORMATION
(952) 947-0007

PRODUCT INFORMATION

PRODUCT NUMBER:
PRODUCT NAME: **PRO E**
REGISTERED TRADE NAME: **PRO E**
PRODUCT DESCRIPTION: **Alkaline/Solvent Cleaner**

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Unlisted ingredients are not "hazardous" per Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200) and/or are not found on the Canadian Workplace Hazardous Materials Information System ingredient disclosure list. See Section 8 for any additional exposure limit guidelines.

Chemical Name	CAS#	Percent	OSHA PEL
2-Butoxyethanol	111-76-2	2-5	TWA (as 2-Butoxyethanol) 50 ppm(skin)
Sodium Metasilicate	6837-92-0	0.5-3	None Established -Recommended Ceiling 2 mg/m ³ Respirable Dust
Sodium Hydroxide	1310-73-2	1-4	TWA (as Sodium Hydroxide) 2mg/m ³

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMS RATING: -- HEALTH 1 - FLAMMABILITY 0, -- REACTIVITY 0

See SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION for personal protective equipment recommendations.

POTENTIAL HEALTH EFFECTS BY ROUT OF ENTRY

EYE: Can cause burns. Symptoms include stinging, tearing, redness, and swelling of the eyes. Can injure the cornea and cause blindness.

SKIN: Can cause permanent skin damage.

INHALATION: It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing this material may be harmful. Symptoms usually occur at air concentrations higher than the recommended exposure limits (See Section 8).

INGESTION: Swallowing this material may be harmful or fatal. Symptoms may include severe stomach and intestinal irritation (nausea, vomiting, diarrhea), abdominal pain, and vomiting of blood. Swallowing this material may cause burns and destroy tissue in the mouth, throat, and digestive tract. Low blood pressure and shock may occur as a result of severe tissue injury.

LONG TERM (CHRONIC) EFFECTS

Target Organs: No Data

Developmental Information: This material (or a component) has been shown to cause harm to the fetus in laboratory animals studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.

Cancer Information: These materials (or its components) are not listed as a carcinogen by the International Agency for Research on Cancer, the National Toxicology Program, or the Occupational Safety and Health Administration. 2-Butoxyethanol has been shown to cause cancer in laboratory animals. The relevance of these findings to humans is uncertain.

Other Health Effects: No Data

Primary Routes of Entry: Inhalation, Skin Absorption, Skin Contact, Eye Contact, Ingestion

SECTION 4 - FIRST AID MEASURES

IF IN EYES: If material gets into the eyes, immediately flush eyes gently with water for at least 20 minutes while holding eyelids apart. If symptoms develop as a result of vapor exposure, immediately move individual away from exposure and into fresh air before flushing as recommended above. Seek immediate medical attention.

IF ON SKIN: Immediately flush skin with water for at least 20 minutes while removing contaminated clothing and shoes. Seek immediate medical attention. Wash clothing before reuse and discard contaminated shoes.

IF SWALLOWED: Seek immediate medical attention. Do not induce vomiting. Vomiting will cause further damage to the mouth and throat. If individual is conscious and alert, immediately rinse mouth with water and give milk or water to drink. If possible do not leave individual unattended.

IF INHALED: If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

NOTE TO PHYSICIANS: Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material skin, lung (for example, asthma-like conditions), eye, liver, and kidneys.

SECTION 5 - FIRE FIGHTING MEASURES

NA = NOT APPLICABLE

NE = NOT ESTABLISHED

FLASH POINT (METHOD): NON-FLAMMABLE (TCC ASTM D-56)

AUTOIGNITION TEMPERATURE: NE

EXPLOSIVE LIMITS: LEL = NE UEL = NE

FIRE AND EXPLOSION HAZARDS: No special fire hazards are known to be associated with this product. Product is NON-FLAMMABLE.

EXTINGUISHING MEDIA: CO₂, Foam, Dry Chemical

SPECIAL FIRE FIGHTING PROCEDURES: Use self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

EXPLOSION DATA: Not sensitive to impact or electrical discharge.

FIRE FIGHTING INSTRUCTIONS: No special precautions necessary when fighting fires involving this product.

HAZARDOUS PRODUCTS OF COMBUSTION: May form carbon dioxide and carbon monoxide.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Persons not wearing proper protective equipment should be excluded from area of spill. Comply with all applicable Federal, State, and Local regulations. Dike if necessary, contain spill with inert absorbents and transfer to containers for disposal. Keep spilled material out of sewers, watersheds, or water systems

LARGE SPILL: Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal. Per good environmental management practices, prevent run-off to sewers, streams and other bodies of water. Stop spill at the source. Cover sewer grates and dike the spill. Absorb spilled material on to absorbents. Shovel materials into container. Close container tightly and dispose of properly.

SECTION 7 - HANDLING AND STORAGE

HANDLING: Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Warning. Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "auto ignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions.

STORAGE: Store in a cool, dry place.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION: Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

SKIN PROTECTION: Wear resistant gloves such as: natural rubber, neoprene, nitrile rubber. To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

RESPIRATORY PROTECTION: If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

ENGINEERING CONTROLS: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

EXPOSURE LIMITS

Chemical name	ACGIH Exposure Limits	OSHA PEL
2-Butoxyethanol	20 ppm - TWA(Skin)	50 ppm - TWA(Skin)
Sodium Metasilicate	Not Established	Not Established
Sodium Hydroxide	2 mg/m ³ Ceiling	2 mg/m ³ TWA

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Clear Liquid; Solvent Odor

ODOR THRESHOLD: Not Established

SPECIFIC GRAVITY: 1.029 ± 0.01

WEIGHT PER GALLON (lbs): 8.57

SOLUBILITY IN WATER: Complete and instant.

BOILING POINT: > 212° F.

FREEZE/MELTING POINT: 32°F

VAPOR PRESSURE: Not Established

VAPOR DENSITY: Not Established

EVAPORATION RATE: (n-Butyl Acetate = 1): < 1.00

pH(1%): 10.75

SECTION 10 - STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions.

CHEMICAL INCOMPATIBILITIES: Avoid contact with strong acids, heat, aluminum, copper, bronze, and strong oxidizers.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION: May form: carbon monoxide and carbon dioxide.

SECTION 11 - TOXICOLOGICAL INFORMATION

Chemical Name	LD50/LC50
2-Butoxyethanol	Oral LD50 for Rats is 470mg/kg Skin LD50 in Rabbits is 220mg/kg
Sodium Metasilicate	Oral LD50 in Rats is 1280mg/kg
Sodium Hydroxide	Oral LD50 in Rats is 220mg/kg Skin LD50 in Rabbits is 1350mg/kg

SECTION 12 - ECOLOGICAL INFORMATION

MATERIAL SAFETY DATA SHEET

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY INFORMATION

CEILING PRO INTERNATIONAL
7456 Washington Avenue South
Eden Prairie, MN 55344

EMERGENCY TELEPHONE NUMBER
1-800-424-9300 CHEMTREC
TELEPHONE NUMBER FOR INFORMATION
(952) 947-0007

PRODUCT INFORMATION

PRODUCT NUMBER:
PRODUCT NAME:
REGISTERED TRADE NAME:
PRODUCT DESCRIPTION:

PRO NEUTRALIZER
PRO NEUTRALIZER
Odor Neutralizer

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Unlisted ingredients are not "hazardous" per Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200) and/or are not found on the Canadian Workplace Hazardous Materials Information System ingredient disclosure list. See Section 8 for any additional exposure limit guidelines.

Chemical Name	CAS#	Percent	OSHA PEL
Isopropyl Alcohol	67-63-0	0.5-3	TWA 400 ppm

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMS RATING: - HEALTH 1 - FLAMMABILITY 0, - REACTIVITY 0
See SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION for personal protective equipment recommendations.

POTENTIAL HEALTH EFFECTS BY ROUT OF ENTRY

EYE: Can cause burns. Symptoms include stinging, tearing, redness, and swelling of the eyes. Can injure the cornea and cause blindness.
SKIN: Can cause permanent skin damage.
INHALATION: It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing this material may be harmful. Symptoms usually occur at air concentrations higher than the recommended exposure limits (See Section 8).
INGESTION: Swallowing this material may be harmful or fatal. Symptoms may include severe stomach and intestinal irritation (nausea, vomiting, diarrhea), abdominal pain, and vomiting of blood. Swallowing this material may cause burns and destroy tissue in the mouth, throat, and digestive tract. Low blood pressure and shock may occur as a result of severe tissue injury.

LONG TERM (CHRONIC) EFFECTS

Target Organs: No Data
Developmental Information: This material (or a component) has been shown to cause harm to the fetus in laboratory animals studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.
Cancer Information: These materials (or its components) are not listed as a carcinogen by the International Agency for Research on Cancer, the National Toxicology Program, or the Occupational Safety and Health Administration. 2-Butoxyethanol has been shown to cause cancer in laboratory animals. The relevance of these findings to humans is uncertain.
Other Health Effects: No Data
Primary Routes of Entry: Inhalation, Skin Absorption, Skin Contact, Eye Contact, Ingestion

SECTION 4 - FIRST AID MEASURES

IF IN EYES: If material gets into the eyes, immediately flush eyes gently with water for at least 20 minutes while holding eyelids apart. If symptoms develop as a result of vapor exposure, immediately move individual away from exposure and into fresh air before flushing as recommended above. Seek immediate medical attention.
IF ON SKIN: Immediately flush skin with water for at least 20 minutes while removing contaminated clothing and shoes. Seek immediate medical attention. Wash clothing before reuse and discard contaminated shoes.
IF SWALLOWED: Seek immediate medical attention. Do not induce vomiting. Vomiting will cause further damage to the mouth and throat. If individual is conscious and alert, immediately rinse mouth with water and give milk or water to drink. If possible do not leave individual unattended.
IF INHALED: If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.
NOTE TO PHYSICIANS: Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material skin, lung (for example, asthma-like conditions), eye, liver, and kidneys.

SECTION 5 - FIRE FIGHTING MEASURES

NA = NOT APPLICABLE NE = NOT ESTABLISHED

FLASH POINT (METHOD): NON-FLAMMABLE (TCC ASTM D-56)
AUTOIGNITION TEMPERATURE: NE
EXPLOSIVE LIMITS: LEL = NE UEL = NE
FIRE AND EXPLOSION HAZARDS: No special fire hazards are known to be associated with this product. Product is NON-FLAMMABLE.
EXTINGUISHING MEDIA: CO₂, Foam, Dry Chemical
SPECIAL FIRE FIGHTING PROCEDURES: Use self-contained breathing apparatus.
UNUSUAL FIRE AND EXPLOSION HAZARDS: None

EXPLOSION DATA: Not sensitive to impact or electrical discharge.

FIRE FIGHTING INSTRUCTIONS: No special precautions necessary when fighting fires involving this product.

HAZARDOUS PRODUCTS OF COMBUSTION: May form carbon dioxide and carbon monoxide.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Persons not wearing proper protective equipment should be excluded from area of spill. Comply with all applicable Federal, State, and Local regulations. Dike if necessary, contain spill with inert absorbents and transfer to containers for disposal. Keep spilled material out of sewers, watersheds, or water systems.

LARGE SPILL: Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal. Per good environmental management practices, prevent run-off to sewers, streams and other bodies of water. Stop spill at the source. Cover sewer grates and dike the spill. Absorb spilled material on to absorbents. Shovel materials into container. Close container tightly and dispose of properly.

SECTION 7 - HANDLING AND STORAGE

HANDLING: Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Warning. Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "auto ignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions.

STORAGE: Store in a cool, dry place.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION: Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

SKIN PROTECTION: Wear resistant gloves such as: natural rubber, neoprene, nitrile rubber. To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

RESPIRATORY PROTECTION: If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

ENGINEERING CONTROLS: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

EXPOSURE LIMITS

Chemical name	ACGIH Exposure Limits	OSHA PEL
Isopropyl Alcohol	400 ppm - TWA	400 ppm - TWA

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Clear Blue Liquid; Floral Odor

ODOR THRESHOLD: Not Established

SPECIFIC GRAVITY: 1.032 ± 0.01

WEIGHT PER GALLON (lbs): 8.64

SOLUBILITY IN WATER: Complete and instant.

BOILING POINT: > 212° F.

FREEZE/MELTING POINT: 32°F

VAPOR PRESSURE: Not Established

VAPOR DENSITY: Not Established

EVAPORATION RATE: (n-Butyl Acetate = 1); < 1.00

pH(1%): 8.50

SECTION 10 - STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions.

CHEMICAL INCOMPATIBILITIES: Avoid contact with strong acids, heat, and strong oxidizers.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION: May form: carbon monoxide and carbon dioxide.

SECTION 11 - TOXICOLOGICAL INFORMATION

Chemical Name	LD50/LC50
Isopropyl Alcohol	Oral LD50 in Rats is 5800mg/kg Inhalation LD-50 in Rats is 12000ppm (8hr)

SECTION 12 - ECOLOGICAL INFORMATION

ECOTOXICAL INFORMATION:

Isopropyl Alcohol:

BOD-5: 1,190-1720 mg/g

MATERIAL SAFETY DATA SHEET

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY INFORMATION

CEILING PRO INTERNATIONAL
7456 Washington Avenue South
Eden Prairie, MN 55344

EMERGENCY TELEPHONE NUMBER
1-800-424-9300 CHEMTREC
TELEPHONE NUMBER FOR INFORMATION
(952) 947-0007

PRODUCT INFORMATION

PRODUCT NUMBER:

PRODUCT NAME:

REGISTERED TRADE NAME:

PRODUCT DESCRIPTION:

CHANDALIER PLUS
CHANDALIER PLUS
Ammonia Glass Cleaner

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Unlisted ingredients are not "hazardous" per Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200) and/or are not found on the Canadian Workplace Hazardous Materials Information System ingredient disclosure list. See Section 9 for any additional exposure limit guidelines.

Chemical Name	CAS#	Percent	OSHA PEL
2-Butoxyethanol	111-76-2	2-5	TWA (as 2-Butoxyethanol) 50 ppm(skin)
Isopropyl Alcohol	67-63-0	0.5-3	TWA 400 ppm
Ammonium Hydroxide	1336-26-6	0.5-3	TWA 50 ppm

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS RATING: - HEALTH 1 - FLAMMABILITY 0, - REACTIVITY 0

See SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION for personal protective equipment recommendations.

POTENTIAL HEALTH EFFECTS BY ROUT OF ENTRY

EYE: Can cause burns. Symptoms include stinging, tearing, redness, and swelling of the eyes. Can injure the cornea and cause blindness.

SKIN: Can cause permanent skin damage.

INHALATION: It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing this material may be harmful. Symptoms usually occur at air concentrations higher than the recommended exposure limits (See Section 8).

INGESTION: Swallowing this material may be harmful or fatal. Symptoms may include severe stomach and intestinal irritation (nausea, vomiting, diarrhea), abdominal pain, and vomiting of blood. Swallowing this material may cause burns and destroy tissue in the mouth, throat, and digestive tract. Low blood pressure and shock may occur as a result of severe tissue injury.

LONG TERM (CHRONIC) EFFECTS

Target Organs: No Data

Developmental Information: This material (or a component) has been shown to cause harm to the fetus in laboratory animals studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.

Cancer Information: These materials (or its components) are not listed as a carcinogen by the International Agency for Research on Cancer, the National Toxicology Program, or the Occupational Safety and Health Administration. 2-Butoxyethanol has been shown to cause cancer in laboratory animals. The relevance of these findings to humans is uncertain.

Other Health Effects: No Data

Primary Routes of Entry: Inhalation, Skin Absorption, Skin Contact, Eye Contact, Ingestion

SECTION 4 - FIRST AID MEASURES

IF IN EYES: If material gets into the eyes, immediately flush eyes gently with water for at least 20 minutes while holding eyelids apart. If symptoms develop as a result of vapor exposure, immediately move individual away from exposure and into fresh air before flushing as recommended above. Seek immediate medical attention.

IF ON SKIN: Immediately flush skin with water for at least 20 minutes while removing contaminated clothing and shoes. Seek immediate medical attention. Wash clothing before reuse and discard contaminated shoes.

IF SWALLOWED: Seek immediate medical attention. Do not induce vomiting. Vomiting will cause further damage to the mouth and throat. If individual is conscious and alert, immediately rinse mouth with water and give milk or water to drink. If possible do not leave individual unattended.

IF INHALED: If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

NOTE TO PHYSICIANS: Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material skin, lung (for example, asthma-like conditions), eye, liver, and kidneys.

SECTION 5 - FIRE FIGHTING MEASURES

NA = NOT APPLICABLE

NE = NOT ESTABLISHED

FLASH POINT (METHOD): NON-FLAMMABLE (TCC ASTM D-56)

AUTOIGNITION TEMPERATURE: NE

EXPLOSIVE LIMITS: LEL = NE UEL = NE

FIRE AND EXPLOSION HAZARDS: No special fire hazards are known to be associated with this product. Product is NON-FLAMMABLE.

EXTINGUISHING MEDIA: CO₂, Foam, Dry Chemical

SPECIAL FIRE FIGHTING PROCEDURES: Use self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

EXPLOSION DATA: Not sensitive to impact or electrical discharge.

FIRE FIGHTING INSTRUCTIONS: No special precautions necessary when fighting fires involving this product.

HAZARDOUS PRODUCTS OF COMBUSTION: May form carbon dioxide and carbon monoxide.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Persons not wearing proper protective equipment should be excluded from area of spill. Comply with all applicable Federal, State, and Local regulations. Dike if necessary, contain spill with inert absorbents and transfer to containers for disposal. Keep spilled material out of sewers, watersheds, or water systems

LARGE SPILL: Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal. Per good environmental management practices, prevent run-off to sewers, streams and other bodies of water. Stop spill at the source. Cover sewer grates and dike the spill. Absorb spilled material on to absorbents. Shovel materials into container. Close container tightly and dispose of properly.

SECTION 7 - HANDLING AND STORAGE

HANDLING: Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Warning. Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "auto ignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions.

STORAGE: Store in a cool, dry place.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION: Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

SKIN PROTECTION: Wear resistant gloves such as: natural rubber, neoprene, nitrile rubber. To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

RESPIRATORY PROTECTION: If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

ENGINEERING CONTROLS: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

EXPOSURE LIMITS

Chemical name	ACGIH Exposure Limits	OSHA PEL
2-Butoxyethanol	20 ppm - TWA(Skin)	50 ppm - TWA(Skin)
Isopropyl Alcohol	400 ppm - TWA	400 ppm - TWA
Ammonia Hydroxide	25 ppm TWA (as ammonia)	30 ppm - TWA(as ammonia)

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Clear Blue Liquid; Ammonia Odor

ODOR THRESHOLD: Not Established

SPECIFIC GRAVITY: 0.997 ± 0.01

WEIGHT PER GALLON (lbs): 8.31

SOLUBILITY IN WATER: Complete and instant.

BOILING POINT: > 212° F.

FREEZE/MELTING POINT: 32°F

VAPOR PRESSURE: Not Established

VAPOR DENSITY: Not Established

EVAPORATION RATE: (n-Butyl Acetate = 1): < 1.00

pH(1%): 9.7

SECTION 10 - STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions.

CHEMICAL INCOMPATIBILITIES: Avoid contact with strong acids, heat, and strong oxidizers.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION: May form: carbon monoxide and carbon dioxide.

SECTION 11 - TOXICOLOGICAL INFORMATION

Chemical Name	LD50/LC50
2-Butoxyethanol	Oral LD50 for Rats is 470mg/kg Skin LD50 in Rabbits is 220mg/kg
Isopropyl Alcohol	Oral LD50 in Rats is 5800mg/kg Inhalation LD-50 in Rats is 12000ppm (8hr)

SECTION 12 - ECOLOGICAL INFORMATION

ECOTOXICAL INFORMATION: Ecotoxicity of 2-Butoxyethanol to Micro-organisms: Bacterial/NA IC50 >5000mg/l; Ecotoxicity of 2-Butoxyethanol to Aquatic Invertebrates: Daphnia LC50 48h >1000mg/l. Ecotoxicity of 2-Butoxyethanol to Fish: Fathead Minnow LC50 96h 1700mg/l.

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CHANDALIER PLUS

Theoretical COD of 2-Butoxyethanol is 2.3. Theoretical 10 Day BOD of 2-Butoxyethanol is 57%. Material is readily biodegradable.

Isopropyl Alcohol:

BOD-5: 1,190-1720 mg/g

BOD-20: 1680 mg/g

Acute Aquatic Effects:

96 h LC-50 (fathead minnow): >1000 µl/l

48 h LC-50 (golden orfe): 8970-9280 mg/l

SECTION 13 - DISPOSAL CONSIDERATIONS

Do not dump into sewers, on the ground, or into any body of water. All disposal methods must be in compliance with all federal, state/provincial and local laws and regulations. Regulations may vary in different locations. Waste characterization and compliance with applicable laws are the responsibility solely of the waste generator.

SECTION 14 - TRANSPORTATION INFORMATION

DOT Proper Shipping Name: Alcohols N.O.S.
 DOT Hazard Class: 3
 Packing Group: III
 UN Number: UN1987
 DOT Labels: Primary: Flammable Subsidiary: None
 DOT Placards: Flammable
 CERCLA Reportable Quantity: NA
 Marine Pollutant: No
 DOT Emergency Response Guidebook Number:

SECTION 15 - REGULATORY INFORMATION

Components:	Isopropyl Alcohol	Ammonium Hydroxide		
<u>OSHA</u> Target Organs:	Eyes, Skin, Respiratory System	Eyes, Skin, Respiratory System		
Carcinogenic Potential: Regulated by OSHA: Listed on NTP Report: IARC Listing:	No No Not Classifiable as to Carcinogenicity to Humans	No No		
<u>U.S. EPA Requirements</u> Release Reporting CERCLA (40 CFR 302): Listed Substance: Reportable Quantity: Category: RCRA Waste Number: Unlisted Substances: Reportable Quantity: Category: RCRA Waste number:	No NA NA D001 None NA NA	Yes 1000 Lbs. C NA None NA NA		
<u>SARA Title III</u> Section 302 & 303 (40 CFR 355) Listed Substance: Reportable Quantity: Planning Threshold:	No NA NA	No NA NA		
Section 311 & 312 (40 CFR 370) Hazard Categories (product): Planning Threshold: Section 313 (40 CFR 372) Listed Toxic Chemical: Reporting Threshold:	Fire: N Sudden Release of Pressure: N 10,000 Lbs. No NA	Reactive: N 10,000 lbs. No NA	Acute Health: Y	Chronic Health: N
<u>U.S. TSCA Status</u> Listed (40 CFR 710):	Yes	Yes		

WHMIS CLASSIFICATION: E

This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the MSDS contains all the information required by the *Controlled Products Regulations*.

SECTION 16 - ADDITIONAL INFORMATION

This Material Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29CFR1910.1200) and the Canadian Workplace Hazardous Materials Information System (WHMIS).

Prepared By: Steven W. Ernst

Telephone No.: 952-890-1820

Date Prepared: 01/12/05

Revision Number: 1078-3

This information is furnished gratuitously, independent of any sale, and for your independent verification. Although we believe the data to be correct as of the date indicated, we make no representations as to its accuracy and such information may not be valid when product is used in any process or combined with other materials. NO REPRESENTATION(S), GUARANTEE(S), OR WARRANTY, EITHER EXPRESS, IMPLIED OR OF ANY NATURE, is made with respect to the product or data provided.

MATERIAL SAFETY DATA SHEET

IDENTITY: Pro D
Bleach Solution

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM

- HMIS RATINGS -

- HMIS HAZARD INDEX -

HEALTH	2	4	SEVERE
FLAMMABILITY	0	3	SERIOUS
REACTIVITY	1	2	MODERATE
PERSONAL PROTECTION	X*	1	SLIGHT
		0	MINIMAL

* See Section XI for Details

SECTION I - COMPANY NAME AND LOCATION

CEILING PRO INTERNATIONAL
7456 Washington Avenue South
Eden Prairie, MN 55344

EMERGENCY TELEPHONE NUMBER
1-800-424-9300 CHEMTREC
TELEPHONE NUMBER FOR INFORMATION
(952) 947-0007

SECTION II - HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

INGREDIENTS	CAS NO.	%	OSHA PEL	ACGIH TLV
Sodium Hypochlorite	7681-52-9	<5.0	1.5mg/m ³ (3 STEL)	1.5mg/m ³ (2.9 STEL)

SECTION III - PHYSICAL /CHEMICAL CHARACTERISTICS

NA = NOT APPLICABLE

NE = NOT ESTABLISHED

APPEARANCE AND ODOR: Straw Yellow Liquid; Chlorine Odor
SPECIFIC GRAVITY: 1.066 ± 0.01
SOLUBILITY IN WATER: Complete
BOILING POINT: 212° F.

VAPOR PRESSURE: NE
VAPOR DENSITY: NE
EVAPORATION RATE
(n-Butyl Acetate = 1): < 1.00

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

NA = NOT APPLICABLE

NE = NOT ESTABLISHED

FLASH POINT (METHOD): Unknown (TCC ASTM D-56)
EXTINGUISHING MEDIA: CO₂, Foam, Dry Chemical
SPECIAL FIRE FIGHTING PROCEDURES: Use self-contained breathing apparatus.
UNUSUAL FIRE AND EXPLOSION HAZARDS: None

FLAMMABLE LIMITS: LEL = NE UEL = NE

SECTION V - REACTIVITY DATA

NA=NOT APPLICABLE

NE = NOT ESTABLISHED

STABILITY: STABLE X UNSTABLE _____
CONDITIONS TO AVOID: Light, heat, low pH, metallic impurities.

INCOMPATIBILITY: Acid, ammonia, metals, cyanides, oxidizers
HAZARDOUS DECOMPOSITION PRODUCTS: Oxygen

HAZARDOUS POLYMERIZATION: MAY OCCUR _____ WILL NOT OCCUR X

SECTION VI - HEALTH HAZARD DATA

NA = NOT APPLICABLE

NE = NOT ESTABLISHED

THRESHOLD LIMIT VALUE: 1.5mg/m³

HEALTH HAZARDS:

ACUTE - See overexposure
CHRONIC - Unknown

ROUTES OF ENTRY:

INHALATION - Yes
SKIN - Yes
INGESTION - Yes

MEDICAL CONDITIONS GENERALLY

AGGRAVATED BY EXPOSURE: Unknown

CARCINOGENICITY:

NTP - No
IARC MONOGRAPHS - No
OSHA REGULATED - No

SIGNS AND SYMPTOMS OF OVEREXPOSURE:

EYES: Burns
SKIN: Burns
INTERNAL: If swallowed, burns of mouth, throat and stomach.
INHALATION: Irritation of the upper respiratory tract.

EMERGENCY AND FIRST AID PROCEDURES:

EYES Immediately flush with cool running water for at least 20 minutes while holding eyelids apart. Remove contact lenses if applicable.

SKIN Immediately flush with cool running water for at least 20 minutes. Remove contaminated clothing and wash before re-use.

INTERNAL If swallowed, call 911 or **1-800-424-9300** immediately for emergency medical assistance. **DO NOT** induce vomiting. Rinse mouth with water, then drink 1 to 2 glasses of water. Never give anything by mouth to an unconscious person.

INHALATION Promptly remove to fresh air.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

NA = NOT APPLICABLE NE = NOT ESTABLISHED

IN CASE OF SPILL: Wear appropriate safety equipment (see section VIII). **Small Spills** - flush to drain with water. **Large Spills** - absorb on commercially available absorbant. Rinse area with water.

WASTE DISPOSAL METHOD: Consult State, Local & Federal regulations governing the disposal of alkaline products.

HANDLING AND STORAGE PRECAUTIONS: **DO NOT** store in warm locations or in direct sunlight.

OTHER PRECAUTIONS: CORROSIVE

SECTION VIII - CONTROL MEASURES

NA = NOT APPLICABLE

NE = NOT ESTABLISHED

RESPIRATORY PROTECTION (SPECIFY TYPE): Wear approved cartridge respirator to maintain PEL/TLV in mist or spray conditions.

VENTILATION: *LOCAL EXHAUST* - To reduce irritating fumes. *MECHANICAL* - NA *SPECIAL* - NA

PROTECTIVE GLOVES: Rubber **EYE PROTECTION:** Goggles / Faceshield

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Rubber Boots.

WORK / HYGIENE PRACTICES: Read product label directions and warnings before use. Wash after product use.

SECTION IX - REGULATORY INFORMATION

Components: Sodium Hypochlorite

OSHA
Target Organs: Eyes, Skin,
Respiratory System

Carcinogenic Potential:
Regulated by OSHA: No
Listed on NTP Report: No
IARC Listing: No

U.S. EPA Requirements

Release Reporting
CERCLA(40 CFR 302):
Listed Substance: Yes
Reportable Quantity: 100 lbs.
Category: B
RCRA Waste number: Not Listed

Unlisted Substances:
Reportable Quantity: None
Category: NA
RCRA Waste number: NA

SARA Title III

Section 302 & 303(40 CFR 355)
Listed Substance: No
Reportable Quantity: NA
Planning Threshold: NA

Section 311 & 312 (40 CFR 370)
Hazard Categories (product): Fire: N Sudden Release of Pressure: N Reactive: Y Acute Health: Y Chronic Health: N
Planning Threshold: 10,000 LBS.

Section 313 (40 CFR 372)
Listed Toxic Chemical: No
Reporting Threshold: NA

U.S. TSCA Status

Listed (40 CFR 710): Yes

SECTION X - TRANSPORTATION INFORMATION

DOT Proper Shipping Name: Hypochlorite Solution,
 DOT Hazard Class: 8
 Packing Group: III
 UN Number: UN1791
 DOT Labels: Primary: None Subsidiary: None
 DOT Placards: ORM-D
 CERCLA Reportable Quantity: 100
 Marine Pollutant: No
 DOT Emergency Response Guidebook Number:

SECTION XI - ADDITIONAL INFORMATION

Special Instructions:

Prepared By: Steven W. Ernst

Date Prepared: 108/02/99

Revision Number: 0520-2

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*** - LETTER DESIGNATIONS OF PERSONAL PROTECTIVE EQUIPMENT**

SAFETY GLASSES	A
SAFETY GLASSES, GLOVES	B
SAFETY GLASSES, GLOVES, SYNTHETIC APRON	C
FACE SHIELD, GLOVES, SYNTHETIC APRON	D
SAFETY GLASSES, GLOVES, DUST RESPIRATOR	E
SAFETY GLASSES, GLOVES SYNTHETIC APRON, DUST RESPIRATOR	F
SAFETY GLASSES, GLOVES, VAPOR RESPIRATOR	G
SPLASH GOGGLES, GLOVES, SYNTHETIC APRON VAPOR RESPIRATOR	H
SAFETY GLASSES, GLOVES COMBINATION DUST/VAPOR RESPIRATOR	I
SPLASH GOGGLES, GLOVES, SYNTHETIC APRON, COMBINATION DUST/VAPOR RESPIRATOR	J
AIRLINE HOOD/MASK, GLOVES, FULL PROTECTIVE SUIT, BOOTS	K
SITUATIONS MAY REQUIRE SPECIALIZED HANDLING-CHECK WITH SUPERVISOR	X

MATERIAL SAFETY DATA SHEET

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY INFORMATION

CEILING PRO INTERNATIONAL
7456 Washington Avenue South
Eden Prairie, MN 55344

EMERGENCY TELEPHONE NUMBER
1-800-424-9300 CHEMTREC
TELEPHONE NUMBER FOR INFORMATION
(952) 947-0007

PRODUCT INFORMATION

PRODUCT NUMBER:

PRODUCT NAME:

REGISTERED TRADE NAME:

PRODUCT DESCRIPTION:

PRO F

PRO F

Mild Alkaline/Solvent Cleaner-Phosphated

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Unlisted ingredients are not "hazardous" per Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200) and/or are not found on the Canadian Workplace Hazardous Materials Information System ingredient disclosure list. See Section 8 for any additional exposure limit guidelines.

Chemical Name	CAS#	Percent	OSHA PEL
2-Butoxyethanol	111-76-2	2-5	TWA (as 2-Butoxyethanol) 50 ppm(skin)
Sodium Metasilicate	6837-92-0	0.5-3	None Established - Recommended Ceiling 2 mg/m ³ Respirable Dust

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMS RATING:-- HEALTH 1 - FLAMMABILITY 0, -- REACTIVITY 0

See SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION for personal protective equipment recommendations.

POTENTIAL HEALTH EFFECTS BY ROUT OF ENTRY

EYE: Can cause burns. Symptoms include stinging, tearing, redness, and swelling of the eyes. Can injure the cornea and cause blindness.

SKIN: Can cause permanent skin damage.

INHALATION: It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing this material may be harmful. Symptoms usually occur at air concentrations higher than the recommended exposure limits (See Section 8).

INGESTION: Swallowing this material may be harmful or fatal. Symptoms may include severe stomach and intestinal irritation (nausea, vomiting, diarrhea), abdominal pain, and vomiting of blood. Swallowing this material may cause burns and destroy tissue in the mouth, throat, and digestive tract. Low blood pressure and shock may occur as a result of severe tissue injury.

LONG TERM (CHRONIC) EFFECTS

Target Organs: No Data

Developmental Information: This material (or a component) has been shown to cause harm to the fetus in laboratory animals studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.

Cancer Information: These materials (or its components) are not listed as a carcinogen by the International Agency for Research on Cancer, the National Toxicology Program, or the Occupational Safety and Health Administration. 2-Butoxyethanol has been shown to cause cancer in laboratory animals. The relevance of these findings to humans is uncertain.

Other Health Effects: No Data

Primary Routes of Entry: Inhalation, Skin Absorption, Skin Contact, Eye Contact, Ingestion

SECTION 4 - FIRST AID MEASURES

IF IN EYES: If material gets into the eyes, immediately flush eyes gently with water for at least 20 minutes while holding eyelids apart. If symptoms develop as a result of vapor exposure, immediately move individual away from exposure and into fresh air before flushing as recommended above. Seek immediate medical attention.

IF ON SKIN: Immediately flush skin with water for at least 20 minutes while removing contaminated clothing and shoes. Seek immediate medical attention. Wash clothing before reuse and discard contaminated shoes.

IF SWALLOWED: Seek immediate medical attention. Do not induce vomiting. Vomiting will cause further damage to the mouth and throat. If individual is conscious and alert, immediately rinse mouth with water and give milk or water to drink. If possible do not leave individual unattended.

IF INHALED: If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

NOTE TO PHYSICIANS: Pre-existing disorders of the following organs (or organ systems) may be aggravated by exposure to this material skin, lung (for example, asthma-like conditions), eye, liver, and kidneys.

SECTION 5 - FIRE FIGHTING MEASURES

NA = NOT APPLICABLE

NE = NOT ESTABLISHED

FLASH POINT (METHOD): NON-FLAMMABLE (TCC ASTM D-56)

AUTOIGNITION TEMPERATURE: NE

EXPLOSIVE LIMITS: LEL = NE

UEL = NE

FIRE AND EXPLOSION HAZARDS: No special fire hazards are known to be associated with this product. Product is NON-FLAMMABLE.

EXTINGUISHING MEDIA: CO₂, Foam, Dry Chemical

SPECIAL FIRE FIGHTING PROCEDURES: Use self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

EXPLOSION DATA: Not sensitive to impact or electrical discharge.

FIRE FIGHTING INSTRUCTIONS: No special precautions necessary when fighting fires involving this product.

HAZARDOUS PRODUCTS OF COMBUSTION: May form carbon dioxide and carbon monoxide.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Persons not wearing proper protective equipment should be excluded from area of spill. Comply with all applicable Federal, State, and local regulations. Dike if necessary, contain spill with inert absorbents and transfer to containers for disposal. Keep spilled material out of sewers, watersheds, or water systems.

LARGE SPILL: Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal. Per good environmental management practices, prevent run-off to sewers, streams and other bodies of water. Stop spill at the source. Cover sewer grates and dike the spill. Absorb spilled material on to absorbents. Shovel materials into container. Close container tightly and dispose of properly.

SECTION 7 - HANDLING AND STORAGE

HANDLING: Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Warning. Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "auto ignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions.

STORAGE: Store in a cool, dry place.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION: Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

SKIN PROTECTION: Wear resistant gloves such as: natural rubber, neoprene, nitrile rubber. To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

RESPIRATORY PROTECTION: If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

ENGINEERING CONTROLS: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

EXPOSURE LIMITS

Chemical name	ACGIH Exposure Limits	OSHA PEL
2-Butoxyethanol	20 ppm - TWA(Skin)	50 ppm - TWA(Skin)
Sodium Metasilicate	Not Established	Not Established

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Clear Liquid: Solvent Odor

ODOR THRESHOLD: Not Established

SPECIFIC GRAVITY: 1.010 ± 0.01

WEIGHT PER GALLON (lbs): 8.42

SOLUBILITY IN WATER: Complete and instant.

BOILING POINT: > 212° F.

FREEZE/MELTING POINT: 32°F

VAPOR PRESSURE: Not Established

VAPOR DENSITY: Not Established

EVAPORATION RATE: (n-Butyl Acetate = 1): < 1.00

pH(1%): 9.52

SECTION 10 - STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions.

CHEMICAL INCOMPATIBILITIES: Avoid contact with strong acids, heat, and strong oxidizers.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION: May form: carbon monoxide and carbon dioxide.

SECTION 11 - TOXICOLOGICAL INFORMATION

Chemical Name	LD50/LC50
2-Butoxyethanol	Oral LD50 for Rats is 470mg/kg Skin LD50 in Rabbits is 220mg/kg
Sodium Metasilicate	Oral LD50 in Rats is 1280mg/kg

SECTION 12 - ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: Ecotoxicity of 2-Butoxyethanol to Micro-organisms: Bacterial/NA IC50 >5000mg/l; Ecotoxicity of 2-Butoxyethanol to Aquatic Invertebrates: Daphnia LC50 48h >1000mg/l. Ecotoxicity of 2-Butoxyethanol to Fish: Fathead Minnow LC50 96h 1700mg/l.

Theoretical COD of 2-Butoxyethanol is 2.3. Theoretical 10 Day BOD of 2-Butoxyethanol is 57%. Material is readily biodegradable.

MATERIAL SAFETY DATA SHEET

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY INFORMATION

CEILING PRO INTERNATIONAL
7456 Washington Avenue South
Eden Prairie, MN 55344

EMERGENCY TELEPHONE NUMBER
1-800-424-9300 CHEMTREC
TELEPHONE NUMBER FOR INFORMATION
(952) 947-0007

PRODUCT INFORMATION

PRODUCT NUMBER:
PRODUCT NAME: **PRO 440**
REGISTERED TRADE NAME: PRO 440
PRODUCT DESCRIPTION: Alkaline/Solvent Cleaner

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Unlisted ingredients are not "hazardous" per Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200) and/or are not found on the Canadian Workplace Hazardous Materials Information System ingredient disclosure list. See Section 8 for any additional exposure limit guidelines.

Chemical Name	CAS#	Percent	OSHA PEL
2-Butoxyethanol	111-76-2	2-5	TWA (as 2-Butoxyethanol) 50 ppm(skin)
Sodium Metasilicate	6837-92-0	0.5-3	None Established - Recommended Ceiling 2 mg/m ³ Respirable Dust
Potassium Hydroxide	1310-58-3	4-7	Ceiling 2mg/m ³

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS RATING: - HEALTH 2 - FLAMMABILITY 0, - REACTIVITY 0

See SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION for personal protective equipment recommendations.

POTENTIAL HEALTH EFFECTS BY ROUTE OF ENTRY

EYE: Can cause burns. Symptoms include stinging, tearing, redness, and swelling of the eyes. Can injure the cornea and cause blindness.

SKIN: Can cause permanent skin damage.

INHALATION: It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing this material may be harmful. Symptoms usually occur at air concentrations higher than the recommended exposure limits (See Section 8).

INGESTION: Swallowing this material may be harmful or fatal. Symptoms may include severe stomach and intestinal irritation (nausea, vomiting, diarrhea), abdominal pain, and vomiting of blood. Swallowing this material may cause burns and destroy tissue in the mouth, throat, and digestive tract. Low blood pressure and shock may occur as a result of severe tissue injury.

LONG TERM (CHRONIC) EFFECTS

Target Organs: No Data

Developmental Information: This material (or a component) has been shown to cause harm to the fetus in laboratory animals studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.

Cancer Information: These materials (or its components) are not listed as a carcinogen by the International Agency for Research on Cancer, the National Toxicology Program, or the Occupational Safety and Health Administration. 2-Butoxyethanol has been shown to cause cancer in laboratory animals. The relevance of these findings to humans is uncertain.

Other Health Effects: No Data

Primary Routes of Entry: Inhalation, Skin Absorption, Skin Contact, Eye Contact, Ingestion

SECTION 4 - FIRST AID MEASURES

IF IN EYES: If material gets into the eyes, immediately flush eyes gently with water for at least 20 minutes while holding eyelids apart. If symptoms develop as a result of vapor exposure, immediately move individual away from exposure and into fresh air before flushing as recommended above. Seek immediate medical attention.

IF ON SKIN: Immediately flush skin with water for at least 20 minutes while removing contaminated clothing and shoes. Seek immediate medical attention. Wash clothing before reuse and discard contaminated shoes.

IF SWALLOWED: Seek immediate medical attention. Do not induce vomiting. Vomiting will cause further damage to the mouth and throat. If individual is conscious and alert, immediately rinse mouth with water and give milk or water to drink. If possible do not leave individual unattended.

IF INHALED: If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

NOTE TO PHYSICIANS: Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material skin, lung (for example, asthma-like conditions), eye, liver, and kidneys.

SECTION 5 - FIRE FIGHTING MEASURES

NA = NOT APPLICABLE

NE = NOT ESTABLISHED

FLASH POINT (METHOD): NON-FLAMMABLE (TCC ASTM D-56)

AUTOIGNITION TEMPERATURE: NE

EXPLOSIVE LIMITS: LEL = NE UEL = NE

FIRE AND EXPLOSION HAZARDS: No special fire hazards are known to be associated with this product. Product is NON-FLAMMABLE.

EXTINGUISHING MEDIA: CO₂, Foam, Dry Chemical

SPECIAL FIRE FIGHTING PROCEDURES: Use self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

EXPLOSION DATA: Not sensitive to impact or electrical discharge.

FIRE FIGHTING INSTRUCTIONS: No special precautions necessary when fighting fires involving this product.

HAZARDOUS PRODUCTS OF COMBUSTION: May form carbon dioxide and carbon monoxide.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Persons not wearing proper protective equipment should be excluded from area of spill. Comply with all applicable Federal, State, and local regulations. Dike if necessary, contain spill with inert absorbents and transfer to containers for disposal. Keep spilled material out of sewers, watersheds, or water systems.

LARGE SPILL: Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal. Per good environmental management practices, prevent run-off to sewers, streams and other bodies of water. Stop spill at the source. Cover sewer grates and dike the spill. Absorb spilled material on to absorbents. Shovel materials into container. Close container tightly and dispose of properly.

SECTION 7 - HANDLING AND STORAGE

HANDLING: Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Warning. Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "auto ignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions.

STORAGE: Store in a cool, dry place.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION: Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

SKIN PROTECTION: Wear resistant gloves such as: natural rubber, neoprene, nitrile rubber. To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

RESPIRATORY PROTECTION: If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

ENGINEERING CONTROLS: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

EXPOSURE LIMITS

Chemical name	ACGIH Exposure Limits	OSHA PEL
2-Butoxyethanol	20 ppm - TWA(Skin)	50 ppm - TWA(Skin)
Sodium Metasilicate	Not Established	Not Established
Potassium Hydroxide	2 mg/m ³ Ceiling	2 mg/m ³ Ceiling

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Clear Green Liquid: Solvent Odor

ODOR THRESHOLD: Not Established

SPECIFIC GRAVITY: 1.052 ± 0.01

WEIGHT PER GALLON (lbs): 8.76

SOLUBILITY IN WATER: Complete and instant.

BOILING POINT: > 212° F.

FREEZE/MELTING POINT: 32°F

VAPOR PRESSURE: Not Established

VAPOR DENSITY: Not Established

EVAPORATION RATE: (n-Butyl Acetate = 1): < 1.00

pH(1%): 11.2

SECTION 10 - STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions.

CHEMICAL INCOMPATIBILITIES: Avoid contact with strong acids, heat, aluminum, copper, bronze, and strong oxidizers.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION: May form: carbon monoxide and carbon dioxide.

SECTION 11 - TOXICOLOGICAL INFORMATION

Chemical Name	LD50/LC50
2-Butoxyethanol	Oral LD50 for Rats is 470mg/kg Skin LD50 in Rabbits is 220mg/kg
Sodium Metasilicate	Oral LD50 in Rats is 1280mg/kg
Potassium Hydroxide	Oral LD50 in Rats is 365mg/kg

SECTION 12 - ECOLOGICAL INFORMATION

ECOTOXICAL INFORMATION: Ecotoxicity of 2-Butoxyethanol to Micro-organisms: Bacterial/NA IC50 >5000mg/l; Ecotoxicity of 2-Butoxyethanol to Aquatic Invertebrates: Daphnia LC50 48h >1000mg/l. Ecotoxicity of 2-Butoxyethano to Fish: Fathead Minnow LC50 96h 1700mg/l.

