SAFETY DATA SHEET

1. Product and Company Identification

Product identifier	**Green Clean (4186-08, 4186-01)**
Other means of identification	Not available
Recommended use	Cleaner/Degreaser
Recommended restrictions	None known.
Manufacturer information	Nu-Calgon 2611 Schuetz Road St. Louis, MO 63043 US Phone: 314-469-7000 / 800-554-5499 Emergency Phone: 1-800-424-9300 (CHEMTREC)
Supplier	See above.

2. Hazards Identification

Physical hazards	Not classified.
Health hazards	Serious eye damage/eye irritation Category 2
Environmental hazards	Not classified.
WHMIS 2015 defined hazards	Not classified
Label elements	

Signal word	Warning
Hazard statement	Causes serious eye irritation.
Precautionary statement	
Prevention	Wear eye protection/face protection. Wash thoroughly after handling.
Response	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Storage	Store away from incompatible materials.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
WHMIS 2015: Health Hazard(s) not otherwise classified (HHNOC)	None known
WHMIS 2015: Physical Hazard(s) not otherwise classified (PHNOC)	None known
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/Information on Ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	%
(2-Methoxymethylethoxy) propanol		34590-94-8	1-5*
2-Propanol, 1-butoxy-		5131-66-8	1-5*
Poly(oxy-1,2-ethanediyl), .alpha.-(2-propylheptyl)-.omega.-hydroxy-		160875-66-1	1-5*
Sodium carbonate		497-19-8	1-5*
Sodium lauriminodipropionate		14960-06-6	1-5*

Composition comments	US GHS: The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200. *CANADA GHS: The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First Aid Measures

Inhalation	If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.
Skin contact	Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists.
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Rinse mouth. Do NOT induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious or is convulsing. Obtain medical attention.
Most important symptoms/effects, acute and delayed	Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes, skin and clothing. Wear rubber gloves and safety glasses with side shields. Keep out of reach of children.

5. Fire Fighting Measures

Suitable extinguishing media	Dry chemical, CO2, water spray or regular foam.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	None known.
Special protective equipment and precautions for firefighters	Firefighters should wear full protective clothing including self-contained breathing apparatus.
Fire-fighting equipment/instructions	Use standard firefighting procedures and consider the hazards of other involved materials.
Specific methods	Move containers from fire area if you can do so without risk.
General fire hazards	No unusual fire or explosion hazards noted.
Hazardous combustion products	May include and are not limited to: Oxides of carbon.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Stop leak if you can do so without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Never return spills to original containers for re-use. Following product recovery, flush area with water. Clean surface thoroughly to remove residual contamination. Prevent entry into waterways, sewer, basements or confined areas. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid release to the environment. Avoid discharge into drains, water courses or onto the ground. Do not discharge into lakes, streams, ponds or public waters. Contact local authorities in case of spillage to drain/aquatic environment.

7. Handling and Storage

Precautions for safe handling	Wash thoroughly after handling. When using do not eat or drink. Use only with adequate ventilation. Avoid breathing vapors or mists of this product. Avoid prolonged exposure. Wear appropriate personal protective equipment. Avoid contact with eyes, skin and clothing. Avoid release to the environment. Do not empty into drains. Keep container tightly closed.
Conditions for safe storage, including any incompatibilities	Store in a closed container. Store away from incompatible materials (see Section 10 of the SDS). Keep out of reach of children. Protect from freezing.

8. Exposure Controls/Personal Protection

Occupational exposure limits

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
(2-Methoxymethylethoxy) propanol (CAS 34590-94-8)	STEL	909 mg/m3
		150 ppm
	TWA	606 mg/m3
		100 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value
(2-Methoxymethylethoxy) propanol (CAS 34590-94-8)	STEL	150 ppm
	TWA	100 ppm

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value
(2-Methoxymethylethoxy) propanol (CAS 34590-94-8)	STEL	150 ppm
	TWA	100 ppm

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value
(2-Methoxymethylethoxy) propanol (CAS 34590-94-8)	STEL	150 ppm
	TWA	100 ppm

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
(2-Methoxymethylethoxy) propanol (CAS 34590-94-8)	STEL	909 mg/m3
		150 ppm
	TWA	606 mg/m3
		100 ppm

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

Components	Type	Value
(2-Methoxymethylethoxy) propanol (CAS 34590-94-8)	PEL	600 mg/m3
		100 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
(2-Methoxymethylethoxy) propanol (CAS 34590-94-8)	STEL	150 ppm
	TWA	100 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
(2-Methoxymethylethoxy) propanol (CAS 34590-94-8)	STEL	900 mg/m3
		150 ppm
	TWA	600 mg/m3
		100 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines

Canada - Alberta OELs: Skin designation

(2-Methoxymethylethoxy) propanol (CAS 34590-94-8) Can be absorbed through the skin.

Canada - British Columbia OELs: Skin designation

(2-Methoxymethylethoxy) propanol (CAS 34590-94-8) Can be absorbed through the skin.

Canada - Manitoba OELs: Skin designation

(2-Methoxymethylethoxy) propanol (CAS 34590-94-8) Can be absorbed through the skin.

Canada - Ontario OELs: Skin designation

(2-Methoxymethylethoxy) propanol (CAS 34590-94-8) Can be absorbed through the skin.

Canada - Quebec OELs: Skin designation

(2-Methoxymethylethoxy) propanol (CAS 34590-94-8) Can be absorbed through the skin.

Canada - Saskatchewan OELs: Skin designation

(2-Methoxymethylethoxy) propanol (CAS 34590-94-8) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

(2-Methoxymethylethoxy) propanol (CAS 34590-94-8) Can be absorbed through the skin.

US. NIOSH: Pocket Guide to Chemical Hazards

(2-Methoxymethylethoxy) propanol (CAS 34590-94-8) Can be absorbed through the skin.

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

(2-Methoxymethylethoxy) propanol (CAS 34590-94-8) Can be absorbed through the skin.

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Rubber gloves. Confirm with a reputable supplier first.

Other As required by employer code.

Respiratory protection Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Respirator should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134), CAN/CSA-Z94.4 and ANSI's standard for respiratory protection (Z88.2).

Thermal hazards Not applicable.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and Chemical Properties

Appearance	Clear
Physical state	Liquid.
Form	Liquid.
Color	Dark green
Odor	Lemon
Odor threshold	Not available.
pH	10.43
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Pour point	Not available.
Specific gravity	Not available.
Partition coefficient (n-octanol/water)	Not available
Flash point	Not available
Evaporation rate	Not available
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available
Flammability limit - upper (%)	Not available
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available
Vapor density	Not available

Relative density	Not available.
Solubility(ies)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	8.63 lbs/gal
VOC (Weight %)	6 %

10. Stability and Reactivity

Reactivity	This product may react with strong oxidizing agents.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Do not mix with other chemicals. Do not mix with chlorinated products.
Incompatible materials	Oxidizers. Acids.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon.

11. Toxicological Information

Routes of exposure	Eye, Skin contact, Inhalation, Ingestion.
Information on likely routes of exposure	
Ingestion	May cause stomach distress, nausea or vomiting.
Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Causes serious eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Information on toxicological effects

Acute toxicity

Components	**Species**	**Test Results**
(2-Methoxymethylethoxy) propanol (CAS 34590-94-8)		
Acute		
Dermal		
LD50	Rabbit	> 19020 mg/kg, 24 Hours, ECHA
		> 19000 mg/kg, 24 Hours, ECHA
		13000 - 14000 mg/kg, 24 Hours, ECHA
		10100 mg/kg, 24 Hours, ECHA
		9510 mg/kg, 24 Hours, ECHA
		9500 mg/kg, 24 Hours, ECHA
		10 ml/kg, 24 Hours, ECHA
		9.5 g/kg, HSDB
	Rat	> 19020 mg/kg, Hours, ECHA
		> 20 ml/kg, Hours, ECHA
Inhalation		
LC50	Not available	
Oral		
LD50	Dog	7.5 ml/kg, ECHA
	Rat	> 5000 mg/kg, ECHA
		5230 mg/kg, ECHA
		5180 mg/kg, ECHA
		5.7 ml/kg, ECHA

Components	Species	Test Results
		5.4 ml/kg, ECHA/HSDB
		5.4 g/kg, HSDB
2-Propanol, 1-butoxy- (CAS 5131-66-8)		
Acute		
Dermal		
LD50	Rabbit	3100 mg/kg
		1400 mg/kg, 24 Hours
		1.6 ml/kg, 24 Hours
	Rat	> 2000 mg/kg, 24 Hours
Inhalation		
LC50	Not available	
	Rat	> 651 ppm, 4 Hours
Oral		
LD50	Rat	> 2000 mg/kg
		3300 mg/kg
		2.8 ml/kg
Poly(oxy-1,2-ethanediyl), .alpha.-(2-propylheptyl)-.omega.-hydroxy- (CAS 160875-66-1)		
Acute		
Dermal		
LD50	Not available	
Inhalation		
LC50	Not available	
Oral		
LD50		> 500 mg/kg
Sodium carbonate (CAS 497-19-8)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg, ECHA
	Rat	> 2000 mg/kg, ECHA
Inhalation		
LC50	Guinea pig	800 mg/m3, 2 Hours, ECHA
	Mouse	1200 mg/m3, 2 Hours, ECHA
	Rat	2300 mg/m3, 2 Hours, ECHA
		2.3 mg/L, 2 Hours, HSDB
Oral		
LD50	Rat	4090 mg/kg, RTECS
		2800 mg/kg, ECHA, HSDB
Sodium lauriminodipropionate (CAS 14960-06-6)		
Acute		
Dermal		
LD50	Rabbit	> 20 g/kg, 24 Hours, ECHA
	Rat	> 2000 mg/kg, 24 Hours, ECHA
Inhalation		
LC50	Not available	
Oral		
LD50	Rat	> 10000 mg/kg

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Exposure minutes	Not available.
Erythema value	Not available.
Oedema value	Not available.

Serious eye damage/eye irritation	Causes serious eye irritation.
Corneal opacity value	Not available.
Iris lesion value	Not available.
Conjunctival reddening value	Not available.
Conjunctival oedema value	Not available.
Recover days	Not available.
Respiratory or skin sensitization	
Respiratory sensitization	Not available.
Skin sensitization	This product is not expected to cause skin sensitization.
Mutagenicity	Not classified.
Carcinogenicity	Not classified.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity	Not classified.
Teratogenicity	Not classified.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not available.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological Information

Ecotoxicity See below

Ecotoxicological data

Components		Species	Test Results
Sodium carbonate (CAS 497-19-8)			
Crustacea	EC50	Daphnia	265 mg/L, 48 Hours
Aquatic			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	156.6 - 298.9 mg/L, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	300 mg/L, 96 hours

Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Mobility in general	Not available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal Considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

Transport of Dangerous Goods (TDG) Proof of Classification Classification Method: Classified as per Part 2, Sections 2.1 – 2.8 of the Transportation of Dangerous Goods Regulations. If applicable, the technical name and the classification of the product will appear below.

U.S. Department of Transportation (DOT)

Not regulated as dangerous goods.

Transportation of Dangerous Goods (TDG - Canada)

Not regulated as dangerous goods.

15. Regulatory Information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Canada NPRI VOCs with Additional Reporting Requirements: Mass reporting threshold/Identification Number

2-Propanol, 1-butoxy- (CAS 5131-66-8)	1 TONNES

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

WHMIS 2015 Exemptions Not applicable

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

The chemicals listed in Section 3 are on the TSCA Chemical Substances Inventory.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

US state regulations

US - California Hazardous Substances (Director's): Listed substance

(2-Methoxymethylethoxy) propanol (CAS 34590-94-8)	Listed.

US - Minnesota Haz Subs: Listed substance

(2-Methoxymethylethoxy) propanol (CAS 34590-94-8)	Listed.

US - New Jersey RTK - Substances: Listed substance

(2-Methoxymethylethoxy) propanol (CAS 34590-94-8)

US - Texas Effects Screening Levels: Listed substance

(2-Methoxymethylethoxy) propanol (CAS 34590-94-8)	Listed.
2-Propanol, 1-butoxy- (CAS 5131-66-8)	Listed.
Poly(oxy-1,2-ethanediyl), .alpha.-(2-propylheptyl)-.omega.-hydroxy- (CAS 160875-66-1)	Listed.
Sodium carbonate (CAS 497-19-8)	Listed.
Sodiumlauriminodipropionate(CAS14960-06-6)	Listed.

US. Massachusetts RTK - Substance List

(2-Methoxymethylethoxy) propanol (CAS 34590-94-8)

US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

US. Pennsylvania Worker and Community Right-to-Know Law

(2-Methoxymethylethoxy) propanol (CAS 34590-94-8)

US. Rhode Island RTK

(2-Methoxymethylethoxy) propanol (CAS 34590-94-8)

US. California Proposition 65

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

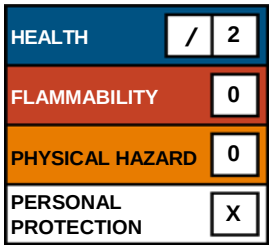
Inventory status

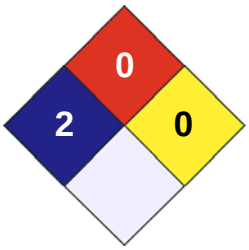
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0





Disclaimer Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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Prepared by Nu-Calgon Technical Service Phone: (314) 469-7000

Other information For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.