

# SAFETY DATA SHEET

## 1. Product and Company Identification

<b>Product identifier</b>	<b>Green Clean (4186-01, 4186-08, 4186-24)</b>
<b>Other means of identification</b>	Not available
<b>Recommended use</b>	Cleaner/Degreaser
<b>Recommended restrictions</b>	None known.
<b>Manufacturer</b>	Nu-Calgon 2611 Schuetz Road St. Louis, MO 63043 US Phone: 314-469-7000 / 800-554-5499 Emergency Phone: 1-800-424-9300 (CHEMTREC)

## 2. Hazards Identification

<b>Physical hazards</b>	Not classified.	
<b>Health hazards</b>	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2
<b>Environmental hazards</b>	Not classified.	
<b>OSHA defined hazards</b>	Not classified.	

**Label elements**



<b>Signal word</b>	Warning
<b>Hazard statement</b>	Causes skin irritation. Causes serious eye irritation.
<b>Precautionary statement</b>	
<b>Prevention</b>	Wash thoroughly after handling. Wear protective gloves. Wear eye/face protection.
<b>Response</b>	If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. Specific treatment (see this label). 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.
<b>Storage</b>	Store away from incompatible materials.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	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
Alcohols, C7-21, ethoxylated		68991-48-0	1-5
Sodium carbonate		497-19-8	1-5
Sodium lauriminodipropionate		14960-06-6	1-5
Alcohols, C9-11, ethoxylated		68439-46-3	0.5-1.5

**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.

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#### 4. First Aid Measures

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<b>Inhalation</b>	If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.
<b>Skin contact</b>	If on skin: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. Specific treatment (see product label). If skin irritation occurs: Get medical advice/attention.
<b>Eye contact</b>	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.
<b>Ingestion</b>	If swallowed: Rinse mouth. Do NOT induce vomiting. If symptoms develop, obtain medical attention.
<b>Most important symptoms/effects, acute and delayed</b>	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	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. Keep out of reach of children.

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#### 5. Fire Fighting Measures

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<b>Suitable extinguishing media</b>	Dry chemical, CO <sub>2</sub> , water spray or regular foam.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	None known.
<b>Special protective equipment and precautions for firefighters</b>	Firefighters should wear full protective clothing including self contained breathing apparatus.
<b>Fire-fighting equipment/instructions</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>Specific methods</b>	Move containers from fire area if you can do so without risk.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.
<b>Hazardous combustion products</b>	May include and are not limited to: Oxides of carbon.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	Not available.
<b>Sensitivity to static discharge</b>	Not available.

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#### 6. Accidental Release Measures

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<b>Personal precautions, protective equipment and emergency procedures</b>	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.
<b>Methods and materials for containment and cleaning up</b>	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.
<b>Environmental precautions</b>	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.

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#### 7. Handling and Storage

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<b>Precautions for safe handling</b>	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.
<b>Conditions for safe storage, including any incompatibilities</b>	Store in a closed container. Store away from incompatible materials (see Section 10 of the SDS). Keep out of reach of children.

## 8. Exposure Controls/Personal Protection

### Occupational exposure limits

#### 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).

### 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

Wear positive pressure self-contained breathing apparatus (SCBA). Avoid breathing mists or vapors. Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.

#### 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	Green
Odor	Lime.
Odor threshold	Not available.
pH	10.5
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

<b>Flammability limit - upper (%)</b>	Not available
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not available
<b>Vapor density</b>	Not available
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	Not available
<b>Auto-ignition temperature</b>	Not available
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Bulk density</b>	8.63

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## 10. Stability and Reactivity

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

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## 11. Toxicological Information

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**Routes of exposure** Eye, Skin contact, Inhalation, Ingestion.

**Information on likely routes of exposure**

<b>Ingestion</b>	Expected to be a low ingestion hazard.
<b>Inhalation</b>	Prolonged inhalation may be harmful.
<b>Skin contact</b>	Causes skin irritation.

**US ACGIH Threshold Limit Values: Skin designation**

(2-Methoxymethylethoxy) propanol (CAS 34590-94-8)	Can be absorbed through the skin.
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**US. NIOSH: Pocket Guide to Chemical Hazards**

(2-Methoxymethylethoxy) propanol (CAS 34590-94-8)	Can be absorbed through the skin.
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**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. Skin irritation. May cause redness and pain.

**Information on toxicological effects**

**Acute toxicity**

Product	Species	Test Results
Green Clean (4186-01, 4186-08, 4186-24) (CAS Mixture)		
<b>Acute</b>		
<i>Inhalation</i>		
LC50	Rat	1818.2 mg/l, 1 hours, estimated

Components	Species	Test Results
(2-Methoxymethylethoxy) propanol (CAS 34590-94-8)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	10000 mg/kg
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rat	5400 mg/kg

Components	Species	Test Results
2-Propanol, 1-butoxy- (CAS 5131-66-8)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	3100 mg/kg
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rat	3300 mg/kg
Alcohols, C7-21, ethoxylated (CAS 68991-48-0)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rat	1410 mg/kg
Alcohols, C9-11, ethoxylated (CAS 68439-46-3)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rat	> 5000 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 20 mg/l, 1 hours
<i>Oral</i>		
LD50	Rat	1200 mg/kg
Sodium carbonate (CAS 497-19-8)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rat	> 2000 mg/kg
<i>Inhalation</i>		
LC50	Guinea pig	400 mg/m3
		0.8 mg/l, 2 Hours
	Mouse	1.2 mg/l, 2 Hours
	Rat	2.3 mg/l, 2 Hours
<i>Oral</i>		
LD50	Rat	4090 mg/kg
Sodium lauriminodipropionate (CAS 14960-06-6)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	10200 mg/kg
<i>Inhalation</i>		
LC50		
<i>Oral</i>		
LD50	Rat	31300 mg/kg
<b>Skin corrosion/irritation</b>	Causes skin irritation.	
<b>Exposure minutes</b>	Not available.	
<b>Erythema value</b>	Not available.	
<b>Oedema value</b>	Not available.	
<b>Serious eye damage/eye irritation</b>	Causes serious eye irritation.	
<b>Corneal opacity value</b>	Not available.	
<b>Iris lesion value</b>	Not available.	
<b>Conjunctival reddening value</b>	Not available.	

<b>Conjunctival oedema value</b>	Not available.
<b>Recover days</b>	Not available.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not available.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>US ACGIH Threshold Limit Values: Skin designation</b>	
(2-Methoxymethylethoxy) propanol (CAS 34590-94-8)	Can be absorbed through the skin.
<b>US. NIOSH: Pocket Guide to Chemical Hazards</b>	
(2-Methoxymethylethoxy) propanol (CAS 34590-94-8)	Can be absorbed through the skin.
<b>US ACGIH Threshold Limit Values: Skin designation</b>	
(2-Methoxymethylethoxy) propanol (CAS 34590-94-8)	Can be absorbed through the skin.
<b>US. NIOSH: Pocket Guide to Chemical Hazards</b>	
(2-Methoxymethylethoxy) propanol (CAS 34590-94-8)	Can be absorbed through the skin.
<b>Germ cell mutagenicity</b>	Not classified.
<b>Mutagenicity</b>	Not classified.
<b>Carcinogenicity</b>	Not classified.
<b>Reproductive toxicity</b>	Not classified.
<b>Teratogenicity</b>	Not classified.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not available.
<b>Chronic effects</b>	Prolonged inhalation may be harmful.
<b>Further information</b>	Not available.
<b>Name of Toxicologically Synergistic Products</b>	Not available.

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## 12. Ecological Information

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<b>Ecotoxicity</b>	See below		
<b>Components</b>		<b>Species</b>	<b>Test Results</b>
Alcohols, C9-11, ethoxylated (CAS 68439-46-3)			
Fish		Rainbow Trout	70.7 mg/l, 96 Hours
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	2.9 - 8.5 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	6 - 12 mg/l, 96 hours
Sodium carbonate (CAS 497-19-8)			
Crustacea	EC50	Daphnia	265 mg/L, 48 Hours
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	156.6 - 298.9 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	300 mg/l, 96 hours
<b>Persistence and degradability</b>	No data is available on the degradability of this product.		
<b>Bioaccumulative potential</b>	No data available.		
<b>Mobility in soil</b>	No data available.		
<b>Mobility in general</b>	Not available.		
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.		

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### 13. Disposal Considerations

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<b>Disposal instructions</b>	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.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	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).
<b>Contaminated packaging</b>	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.

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### 14. Transport Information

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#### U.S. Department of Transportation (DOT)

Not regulated as dangerous goods.

#### Transportation of Dangerous Goods (TDG - Canada)

Not regulated as dangerous goods.

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### 15. Regulatory Information

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

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

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

**Canada WHMIS Ingredient Disclosure: Threshold limits**

(2-Methoxymethylethoxy) propanol (CAS 34590-94-8) 1 %

Sodium carbonate (CAS 497-19-8) 1 %

**WHMIS status** Controlled

**WHMIS classification** Class D - Division 2B

#### WHMIS labeling



**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
All components are on the U.S. EPA TSCA Inventory List.

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

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

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

Not regulated.

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

Not regulated.

**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****Safe Drinking Water Act (SDWA)** Not regulated.**Food and Drug Administration (FDA)** Not regulated.**US state regulations**

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

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

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

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

Not 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) Listed.

**US - Texas Effects Screening Levels: Listed substance**

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

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

Alcohols, C9-11, ethoxylated (CAS 68439-46-3) Listed.

Sodium carbonate (CAS 497-19-8) Listed.

**US. Massachusetts RTK - Substance List**

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

**US. Pennsylvania RTK - Hazardous Substances**

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

**US. Rhode Island RTK**

Not regulated.

**Inventory status**

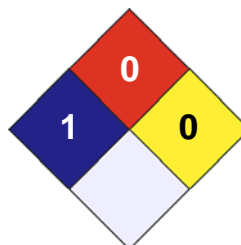
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*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

<b>HEALTH</b>	/ 1
<b>FLAMMABILITY</b>	0
<b>PHYSICAL HAZARD</b>	0
<b>PERSONAL PROTECTION</b>	X

**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.

**Issue date**

20-April-2015

**Effective date**

20-April-2015

**Expiry date**

20-April-2018

**Further information**

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

**Prepared by**

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



**Other information**

This Safety Data Sheet was prepared to comply with the current OSHA Hazard Communication Standard (HCS) adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).  
This SDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.