



Safety Data Sheet

Material Name: E-Kleen SR 196

SDS ID: EPI-0215c

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

E-Kleen SR 196

Product Use

Alkaline cleaner

Details of the supplier of the safety data sheet

Electrochemical Products Inc.

17000 West Lincoln Ave

New Berlin, WI 53151

Phone: 262-786-9330

Emergency Phone #: NCEC (#EPI-29003) +1 202 464 2554, +44 1865 407333

E-mail: us-sales@epi.com

www.epi.com

Fax: 262-786-9403

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Skin Corrosion/Irritation - Category 1

Serious Eye Damage/Eye Irritation - Category 1

GHS Label Elements

Symbol(s)



Signal Word

Danger

Hazard Statement(s)

Causes severe skin burns and eye damage

Precautionary Statement(s)

Prevention



Safety Data Sheet

Material Name: E-Kleen SR 196

SDS ID: EPI-0215c

Wear protective gloves/protective clothing/eye protection/face protection
Wash thoroughly after handling
Do not breathe dusts or mists

Response

IF INHALED: Remove person to fresh air and keep comfortable for breathing
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
Immediately call a POISON CENTER or doctor
Specific treatment (see label)

Storage

Store locked up

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
7732-18-5	Water	65-70
1344-09-8	Sodium silicate	7-10
1310-73-2	Sodium hydroxide	2-5
34590-94-8	Dipropylene glycol monomethyl ether	1-5
39464-70-5	Polyethylene glycol phenyl ether phosphate	2-3
123-91-1	1,4-Dioxane	0.0003-0.0004
75-21-8	Ethylene oxide	0.00003-0.00004
61791-14-8	Ethoxylated coconut oil alkyl amine	0.2-0.5



Safety Data Sheet

Material Name: E-Kleen SR 196

SDS ID: EPI-0215c

Section 4 - FIRST AID MEASURES

Inhalation

Remove to fresh air. Give oxygen if breathing is difficult. Give artificial respiration if not breathing. Get immediate medical attention.

Skin

Immediately flush skin with lots of running water for 30 minutes. Remove contaminated clothing and shoes. Wash before reuse. Get immediate medical attention.

Eyes

Immediately flush with lots of running water for 30 minutes, lifting the upper and lower eye lids occasionally. Washing eyes within several seconds is essential to achieve maximum effectiveness. Get immediate medical attention.

Ingestion

Do not induce vomiting. Give large quantities of water or milk. Get immediate medical attention. Do not give anything by mouth to an unconscious or convulsing person.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Dry chemical, foam, carbon dioxide, water fog.

Unsuitable Extinguishing Media

None known.

Special Hazards Arising from the Chemical

None identified.

Hazardous Combustion Products

None identified.

Fire Fighting Measures

Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Take proper precautions to ensure your own health and safety before attempting spill control or clean-up. For more specific information, refer to the Emergency Overview on Page 1, Exposure Controls and Personal Protection in Section 8 and Disposal Considerations in Section 13 of this SDS. Isolate area. Keep unnecessary personnel away. Wear appropriate protective equipment during cleanup.



Safety Data Sheet

Material Name: E-Kleen SR 196

SDS ID: EPI-0215c

Methods and Materials for Containment and Cleaning Up

After containment, it should be shoveled up or removed by vacuum truck (if liquid) to chemical waste area. Neutralize residue with dilute acid. Flush spill area with water followed by liberal coverage of Sodium Bicarbonate.

Environmental Precautions

Comply with regulations for spill reporting.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Wash thoroughly after handling.

Conditions for Safe Storage, Including any Incompatibilities

Store locked up

Store in a well-ventilated place. Keep container tightly closed.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Sodium hydroxide	1310-73-2
ACGIH:	2 mg/m ³ Ceiling
NIOSH:	2 mg/m ³ Ceiling
	10 mg/m ³ IDLH
OSHA (US):	2 mg/m ³ TWA
Mexico:	2 mg/m ³ Ceiling
Dipropylene glycol monomethyl ether	34590-94-8
ACGIH:	100 ppm TWA
	150 ppm STEL
	Skin - potential significant contribution to overall exposure by the cutaneous route
NIOSH:	100 ppm TWA; 600 mg/m ³ TWA
	150 ppm STEL; 900 mg/m ³ STEL



Safety Data Sheet

Material Name: E-Kleen SR 196

SDS ID: EPI-0215c

	Potential for dermal absorption
	600 ppm IDLH
Europe:	50 ppm TWA; 308 mg/m ³ TWA
	Possibility of significant uptake through the skin
OSHA (US):	100 ppm TWA; 600 mg/m ³ TWA
	prevent or reduce skin absorption
Mexico:	100 ppm TWA LMPE-PPT; 60 mg/m ³ TWA LMPE-PPT
	150 ppm STEL [LMPE-CT]; 900 mg/m ³ STEL [LMPE-CT]
	Skin - potential for cutaneous absorption
1,4-Dioxane	123-91-1
ACGIH:	20 ppm TWA
	Skin - potential significant contribution to overall exposure by the cutaneous route
NIOSH:	1 ppm Ceiling 30 min; 3.6 mg/m ³ Ceiling 30 min
	500 ppm IDLH
Europe:	20 ppm TWA; 73 mg/m ³ TWA
OSHA (US):	100 ppm TWA; 360 mg/m ³ TWA
	prevent or reduce skin absorption
Mexico:	25 ppm TWA LMPE-PPT; 90 mg/m ³ TWA LMPE-PPT
	100 ppm STEL [LMPE-CT]; 360 mg/m ³ STEL [LMPE-CT]
	Skin - potential for cutaneous absorption
Ethylene oxide	75-21-8
ACGIH:	1 ppm TWA
NIOSH:	0.1 ppm TWA (less than stated value); 0.18 mg/m ³ TWA (less than stated value)
	5 ppm Ceiling 10 min/day; 9 mg/m ³ Ceiling 10 min/day
	800 ppm IDLH



Safety Data Sheet

Material Name: E-Kleen SR 196

SDS ID: EPI-0215c

OSHA (US):	1 ppm TWA
	5 ppm Excursion Limit (See 29 CFR 1910.1047) 15 min; 0.5 ppm Action Level (See 29 CFR 1910.1047); 1 ppm TWA (See 29 CFR 1910.1047)
	5 ppm STEL (See 29 CFR 1910.1047)
Mexico:	1 ppm TWA LMPE-PPT; 2 mg/m ³ TWA LMPE-PPT

Biological limit value

There are no biological limit values for any of this product's components.

Engineering Controls

Use general ventilation and use local exhaust, where possible, in confined or enclosed spaces.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear safety glasses with side shields (or chemical goggles).

Skin Protection

The use of protective coveralls and long sleeved clothing is recommended for prolonged or repeated contact.

Respiratory Protection

If ventilation is not sufficient to effectively prevent buildup of vapor/mist/fume/dust, appropriate NIOSH/MSHA respiratory protection must be provided.

Glove Recommendations

Wear impervious gloves.

Protective Materials

Eye wash fountain and emergency showers are recommended.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear Water White Solution	Physical State	Liquid
Odor	Mild Sweet Odor	Color	Clear
Odor Threshold	Not available	pH	12.6 - 13.6
Melting Point	Not available	Boiling Point	214 °F (101 °C)
Freezing point	Not available	Evaporation Rate	Not available
Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	Not available	Flash Point	Not available



Safety Data Sheet

Material Name: E-Kleen SR 196

SDS ID: EPI-0215c

Lower Explosive Limit	Not available	Decomposition	Not available
Upper Explosive Limit	Not available	Vapor Pressure	Not available
Vapor Density (air=1)	Not available	Specific Gravity (water=1)	1.07 - 1.09
Water Solubility	Complete	Partition coefficient: n-octanol/water	Not available
Viscosity	Not available	Solubility (Other)	Not available
Density	Not available		

Section 10 - STABILITY AND REACTIVITY

Reactivity

Will not occur.

Chemical Stability

This is a stable material.

Possibility of Hazardous Reactions

Will not occur.

Conditions to Avoid

Avoid contact with extreme heat.

Incompatible Materials

Avoid contact with acids.

Hazardous decomposition products

None identified.

Section 11 - TOXICOLOGICAL INFORMATION

Acute and Chronic Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Water (7732-18-5)

Oral LD50 Rat >90 mL/kg

Sodium silicate (1344-09-8)



Safety Data Sheet

Material Name: E-Kleen SR 196

SDS ID: EPI-0215c

Oral LD50 Rat 1960 mg/kg
Sodium hydroxide (1310-73-2)
Dermal LD50 Rabbit 1350 mg/kg
Dipropylene glycol monomethyl ether (34590-94-8)
Oral LD50 Rat 5400 µL/kg
Dermal LD50 Rabbit 9500 mg/kg
1,4-Dioxane (123-91-1)
Oral LD50 Rat 5170 mg/kg
Dermal LD50 Rabbit 7600 µL/kg
Inhalation LC50 Rat 46 mg/L 2 h
Ethylene oxide (75-21-8)
Oral LD50 Rat 72 mg/kg
Inhalation LC50 Rat 800 ppm 4 h
Ethoxylated coconut oil alkyl amine (61791-14-8)
Oral LD50 Rat 750 mg/kg

Immediate Effects

No information on significant adverse effects.

Delayed Effects

No information on significant adverse effects.

Irritation/Corrosivity Data

No data available.

Respiratory Sensitization

No data available.

Dermal Sensitization

No data available.

Component Carcinogenicity

1,4-Dioxane	123-91-1
ACGIH:	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC:	Monograph 71 [1999]; Supplement 7 [1987]; Monograph 11 [1976] (Group 2B (possibly carcinogenic to humans))
NTP:	Reasonably Anticipated To Be A Human Carcinogen
DFG:	Category 4 (no significant contribution to human cancer)
OSHA:	Present
Ethylene oxide	75-21-8
ACGIH:	A2 - Suspected Human Carcinogen



Safety Data Sheet

Material Name: E-Kleen SR 196

SDS ID: EPI-0215c

IARC:	Monograph 100F [2012]; Monograph 97 [2008]; Monograph 60 [1994] (overall evaluation upgraded from Group 2A to Group 1 based on mechanistic and other relevant data) (Group 1 (carcinogenic to humans))
NTP:	Known Human Carcinogen
DFG:	Category 2 (considered to be carcinogenic for man)
OSHA:	Present
OSHA:	see 29 CFR 1910.1047

Germ Cell Mutagenicity

No data available.

Tumorigenic Data

No data available

Reproductive Toxicity

No data available.

Specific Target Organ Toxicity - Single Exposure

No data available.

Specific Target Organ Toxicity - Repeated Exposure

No data available.

Aspiration hazard

No data available.

Medical Conditions Aggravated by Exposure

No data available.

Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity

Sodium silicate	1344-09-8
Fish:	LC50 96 h Lepomis macrochirus 301 - 478 mg/L; LC50 96 h Brachydanio rerio 3185 mg/L [semi-static]
Sodium hydroxide	1310-73-2
Fish:	LC50 96 h Oncorhynchus mykiss 45.4 mg/L [static]
Dipropylene glycol monomethyl ether	34590-94-8



Safety Data Sheet

Material Name: E-Kleen SR 196

SDS ID: EPI-0215c

Fish:	LC50 96 h Pimephales promelas >10000 mg/L [static]
Invertebrate:	LC50 48 h Daphnia magna 1919 mg/L IUCLID
1,4-Dioxane	123-91-1
Fish:	LC50 96 h Lepomis macrochirus >10000 mg/L [static]; LC50 96 h Lepomis macrochirus >10000 mg/L [semi-static]; LC50 96 h Pimephales promelas 9850 mg/L [flow-through]; LC50 96 h Pimephales promelas 10306 - 14742 mg/L [static]; LC50 96 h Pimephales promelas 9850 mg/L
Invertebrate:	EC50 48 h water flea 163 mg/L [static]
Ethylene oxide	75-21-8
Fish:	LC50 96 h Pimephales promelas 73 - 96 mg/L
Invertebrate:	LC50 48 h Daphnia magna 137 - 300 mg/L IUCLID

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Waste must be handled in accordance with all federal, state, provincial, and local regulations. Do not allow this material to drain into sewers/water supplies. The U.S. EPA has not published waste numbers for this product's components.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

Shipping Name: Sodium hydroxide, solution

Hazard Class: 8

UN/NA #: UN1824

Packing Group: II

Required Label(s): Corrosive

TDG Information:

Shipping Name: Sodium hydroxide, solution

Hazard Class: 8

UN#: UN1824

Packing Group: II

Required Label(s): Corrosive



Safety Data Sheet

Material Name: E-Kleen SR 196

SDS ID: EPI-0215c

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Sodium hydroxide	1310-73-2
CERCLA:	1000 lb final RQ; 454 kg final RQ
1,4-Dioxane	123-91-1
SARA 313:	0.1 % de minimis concentration
CERCLA:	100 lb final RQ; 45.4 kg final RQ
Ethylene oxide	75-21-8
SARA 302:	1000 lb TPQ
SARA 313:	0.1 % de minimis concentration
CERCLA:	10 lb final RQ; 4.54 kg final RQ
OSHA (safety):	5000 lb TQ
SARA 304:	10 lb EPCRA RQ

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Sodium hydroxide	1310-73-2	Yes	Yes	Yes	Yes	Yes
Dipropylene glycol monomethyl ether	34590-94-8	Yes	Yes	Yes	Yes	Yes
1,4-Dioxane	123-91-1	Yes	Yes	Yes	Yes	Yes
Ethylene oxide	75-21-8	Yes	Yes	Yes	Yes	Yes

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer
WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects

1,4-Dioxane	123-91-1
-------------	----------



Safety Data Sheet

Material Name: E-Kleen SR 196

SDS ID: EPI-0215c

Carc:	carcinogen , 1/1/1988
Ethylene oxide	75-21-8
Carc:	carcinogen , 7/1/1987
Repro/Dev. Tox	developmental toxicity , 8/7/2009
	male reproductive toxicity , 8/7/09
	female reproductive toxicity , initial date 2/27/87

Canada Regulations

This material is a controlled product under Canadian WHMIS regulations.

Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

Sodium hydroxide	1310-73-2
	1 %
Dipropylene glycol monomethyl ether	34590-94-8
	1 %
1,4-Dioxane	123-91-1
	0.1 %
Ethylene oxide	75-21-8
	0.1 %

Component Analysis - Inventory

Water (7732-18-5)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes

Sodium silicate (1344-09-8)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes



Safety Data Sheet

Material Name: E-Kleen SR 196

SDS ID: EPI-0215c

Sodium hydroxide (1310-73-2)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Dipropylene glycol monomethyl ether (34590-94-8)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Polyethylene glycol phenyl ether phosphate (39464-70-5)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No

1,4-Dioxane (123-91-1)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Ethylene oxide (75-21-8)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes

Ethoxylated coconut oil alkyl amine (61791-14-8)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Section 16 - OTHER INFORMATION

HMIS Rating



Safety Data Sheet

Material Name: E-Kleen SR 196

SDS ID: EPI-0215c

Health: 2 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 2 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; ISHL - Japan Industrial Safety and Health Law; JP - Japan; Kow - Octanol/water partition coefficient; KECI - Korea Existing Chemicals Inventory; KECL - Korea Existing Chemicals List; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; MX - Mexico; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH - Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TCCA - Korea Toxic Chemicals Control Act.; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TW - Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Disclaimer:

Reasonable care has been taken in the preparation of this information; however, the manufacturer makes no warranty whatsoever including the warranty of merchantability, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental, consequential, or other such damages resulting from its use or misuse..