



SAFETY DATA SHEET

611 Machine Kleen™

Section 1. Identification

GHS product identifier	: 611 Machine Kleen™
Other means of Identification	: Not available
Product type	: Liquid.
Identified uses	: Alkaline cleaner that removes oils and contaminants without residue.
Supplier's details	: Schaeffer Mfg. Company 102 Barton Street Saint Louis, Missouri 63104 Tel: 314-865-4100 Fax: 314-865-4107 Toll Free: 1-800-325-9962 Email: safety@schaefferoil.com Web: http://www.schaefferoil.com
Emergency telephone number (with hours of operation)	: +1 314 865-4105 (24-hour response number)

Section 2. Hazards identification

OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
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Classification of the substance or mixture	: SKIN CORROSSION/IRRITATION- Category 2 SERIOUS EYE DAMAGE/EYE IRRITATION- Category 2A
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GHS label elements Hazard Pictograms

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Signal word Hazard statements

: Warning
: Causes serious eye irritation.
Causes skin irritation.

Precautionary statements Prevention

: Wear protective gloves. Wear eye protection or face protection.
Wash hands thoroughly after handling.

Section 2. Hazards identification

- Response** : IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse.
- Storage** : Not applicable.
- Disposal** : Not applicable.
- Hazards not otherwise classified** : Causes severe digestive tract burns

Section 3. Composition/information on ingredients

Substance/mixture: Mixture

Ingredient name	%	CAS number
Sodium metasilicate	5 – 10	6834-92-0
Phosphoric acid	1 – 5	7664-38-2
Sodium hydroxide	1 – 5	1310-73-2
Poly (oxy-1,2 ethanediyl), α -phosphono- ω -(methylphenoxy)-, potassium salt	1 – 5	66057-30-5
Potassium hydroxide	1 – 5	1310-58-3

Any concentration shown as a range is to protect confidentially or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Maintain an open airway. Get medical attention if symptoms occur.
- Skin contact** : Flush contaminated skin with plenty of water. Continue to rinse for at least 20 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.

Section 4. First aid measures

- Inhalation** : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.
- Skin contact** : Causes skin irritation.
- Ingestion** : Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
Pain or irritation
Watering
Redness
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Adverse symptoms may include the following:
Irritation
Redness
- Ingestion** : Adverse symptoms may include the following:
Stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing Media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : No specific fire or explosion hazard.

- Hazardous thermal decomposition product** : Decomposition products may include the following materials:
Carbon dioxide
Carbon monoxide
Phosphorus oxides
Metal oxide/oxides

- Special protective actions for fire-fighters** : No special measures are required.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see sections 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures. Remove contaminated clothing and protective equipment before Entering eating areas.

Conditions for safe storage including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

United States

Occupational exposure limit

<u>Ingredient name</u>	<u>Exposure limits</u>
Phosphoric acid	ACGIH TLV (United States, 4/2014). STEL: 3 mg/m ³ 15 minutes. TWA: 1 mg/m ³ 8 hours. NIOSH REL (United States, 10/2013). STEL: 3 mg/m ³ 15 minutes. TWA: 1 mg/m ³ 8 hours. OSHA PEL (United States, 2/2013). TWA: 1 mg/m ³ 8 hours.
Sodium hydroxide	ACGIH TLV (United States, 4/2014). CEIL: 2 mg/m ³ NIOSH REL (United States, 10/2013). CEIL: 2 mg/m ³ OSHA PEL (United States, 2/2013). TWA: 2 mg/m ³ 8 hours.
Potassium hydroxide	ACGIH TLV (United States, 4/2014). CEIL: 2 mg/m ³ NIOSH REL (United States, 10/2013). TWA: 2 mg/m ³ 10 hours. OSHA PEL 1989 (United States, 3/1989). CEIL: 2 mg/m ³

Canada

<u>Occupational exposure limits</u>		<u>TWA (8 hours)</u>			<u>STEL (15 mins)</u>			<u>Ceiling</u>			<u>Notations</u>
<u>Ingredient</u>	<u>List name</u>	<u>ppm</u>	<u>mg/m³</u>	<u>Other</u>	<u>ppm</u>	<u>mg/m³</u>	<u>Other</u>	<u>ppm</u>	<u>mg/m³</u>	<u>Other</u>	
Phosphoric acid	US ACGIH 4/2014	-	1	-	-	3	-	-	-	-	[3]
	AB 4/2009	-	1	-	-	3	-	-	-	-	
	BC 7/2013	-	1	-	-	3	-	-	-	-	
	ON 1/2013	-	1	-	-	3	-	-	-	-	
	QC 1/2014	-	1	-	-	3	-	-	-	-	
Potassium hydroxide	US ACGIH 4/2014	-	-	-	-	-	-	-	2	-	[3]
	AB 4/2009	-	-	-	-	-	-	-	2	-	
	BC 7/2013	-	-	-	-	-	-	-	2	-	
	ON 1/2013	-	-	-	-	-	-	-	2	-	
	QC 1/2014	-	-	-	-	2	-	-	-	-	
Sodium hydroxide	US ACGIH 4/2014	-	-	-	-	-	-	-	2	-	[3]
	AB 4/2009	-	-	-	-	-	-	-	2	-	
	BC 7/2013	-	-	-	-	-	-	-	2	-	
	ON 1/2013	-	-	-	-	-	-	-	2	-	
	QC 1/2014	-	-	-	-	2	-	-	-	-	

[3]Skin sensitization

Appropriate engineering controls

Environmental exposure controls

- : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Section 8. Exposure controls/personal protection

Individual protection measures

Hygiene measures	: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
<u>Skin Protection</u>	
Hand protection	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Body protection	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved.
Other skin protection	: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved.
Respiratory protection	: If a risk assessment indicates that respiratory protection is required, use a properly fitted, air-purifying or supplied air respirator that complies with an approved standard. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

<u>Appearance</u>	
Physical state	: Liquid. [Clear.]
Color	: Yellow.
Odor	: Mild
Odor threshold	: Not available.
pH	: 10
Melting point/Dropping Point	: Not applicable.
Boiling Point	: Not available.
Flash point	: Not available.
Evaporation point	: Not available.
Flammability (solid, gas)	: Not available.
Lower and upper explosive (flammable) limits	: Not available.
Vapor pressure	: Not available.
Vapor density	: Not available.
Relative density	: 1.141

Section 9. Physical and chemical properties

Solubility	: Soluble.
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Not available.
Volatility	: Not available.
VOC content (w/w)	: 0.0014% (w/w).

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity for this product or its ingredients.
Chemical stability	: This product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: No specific data.
Incomplete materials	: Highly reactive or incompatible with the following materials: Acids and moisture. Reactive or incompatible with the following materials: Oxidizing materials Metals and alkalis
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Sodium metasilicate	LD50 Oral	Rat	1153 mg/kg	-
Phosphoric acid	LD50 Oral	Rat	1.25 g/kg	-
Potassium hydroxide	LD50 Oral	Rat	273 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Sodium metasilicate	Skin - Moderate irritant	Guinea pig	-	24 hours 250 mg	-
	Skin - Severe irritant	Human	-	24 hours 250 mg	-
	Skin - Severe irritant	Rabbit	-	24 hours 250 mg	-
Sodium hydroxide	Eyes - Severe irritant	Monkey	-	24 hours 1%	-
	Eyes - Mild irritant	Rabbit	-	400 µg	-
	Eyes - Severe irritant	Rabbit	-	24 hours 50 µg	-
	Eyes - Severe irritant	Rabbit	-	1%	-
	Eyes - Severe irritant	Rabbit	-	0.5 minutes 1 mg	-
	Skin - Mild irritant	Human	-	24 hours 2 %	-
	Skin - Severe irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 1 mg	-
	Skin - Severe irritant	Rabbit	-	24 hours 50 mg	-
Potassium hydroxide	Skin - Severe irritant	Guinea pig	-	24 hours 50 mg	-
	Skin - Severe irritant	Human	-	24 hours 50 mg	-

Sensitization

There is no data available.

Carcinogenicity

There is no data available.

Section 11. Toxicological information

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Sodium metasilicate	Category 3	Not applicable	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

There is no data available.

Information on the likely routes of exposure : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.
- Skin contact** : Causes skin irritation.
- Ingestion** : Irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
Pain or irritation
Watering
Redness
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Adverse symptoms may include the following:
Irritation
Redness
- Ingestion** : Adverse symptoms may include the following:
Stomach pains

Delayed and immediate effects and also chronic effect from short and long term exposure

Short term exposure

- Potential immediate effects** : No known significant effects or critical hazards.

Potential delayed effects: No known significant effects or critical hazards.

Long term exposure

- Potential immediate effects** : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

- General** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.

Section 11. Toxicological information

Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	12133.8 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Sodium metasilicate	Acute EC50 33.53 mg/L Fresh water	Crustaceans – Ceriodaphnia dubia – Neonate	48 hours
	Acute LC50 2320 ppm Fresh water	Fish – Gambusia affinis – Adult	96 hours
	Chronic NOEC 2320 ppm Fresh water	Algae – Pseudokirchneriella subcapitata	72 hours
Phosphoric acid	Acute LC50 138 ppm Fresh water	Fish – Gambusia affinis – Adult	96 hours
Sodium hydroxide	Acute EC50 40.38 mg/L Fresh water	Crustaceans – Ceriodaphnia dubia – Neonate	48 hours
	Acute LC50 125 ppm Fresh water	Fish – Gambusia affinis – Adult	96 hours
Potassium hydroxide	Acute LC50 80 ppm Fresh water	Fish – Gambusia affinis – Adult	96 hours

Persistence and degradability

There is no data available.

Bioaccumulative potential

There is no data available.

Mobility in soil

Soil/water partition coefficient (Koc) : There is no data available.

Other adverse effects : No known significant effects or critical hazards

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transportation information

	DOT Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper Shipping name	-	-	-
Transport Hazard class(es)	-	-	-
Packing group	-	-	-
Environmental Hazards	No.	No.	No.
Additional Information	-	-	-

AERG : Not applicable.

Special precautions for user: **Transport within user's premises:** always transport closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **United States inventory (TSCA 8b):** All components are listed or exempted.
Clean Water Act (CWA) 311: Phosphoric acid; Potassium hydroxide; Sodium hydroxide; Propylene oxide

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed.

Clean Air Act Section 602 Class I Substances : Not listed.

Clean Air Act Section 602 Class II Substances : Not listed.

DEA List I Chemicals (Precursor Chemicals) : Not listed.

DEA List II Chemicals (Essential Chemicals) : Not listed.

SARA 302/304

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Ethylene oxide	0 - 0.01	Yes.	-	-	-	-
Propylene oxide	0 - 0.01	Yes.	10000	1444.3	100	14.4

Section 15. Regulatory information

SARA 304 RQ : 101010101 lbs / 45858585.9 kg [8591884.2 gal / 32523819.8 L]

SARA 311/312

Classification : Immediate (acute) health hazard.

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Sodium metasilicate	5 – 10	No.	No.	No.	Yes.	No.
Phosphoric acid	1 – 5	No.	No.	No.	Yes.	No.
Sodium hydroxide	1 – 5	No.	No.	Yes.	Yes.	No.
Poly(oxy-1,2-ethanediyl), α-phosphono-ω-(methylphenoxy)-, potassium salt	1 – 5	No.	No.	No.	Yes.	No.
Potassium hydroxide	1 – 5	No.	No.	No.	Yes.	No.

SARA 313

No products were found.

State regulations

Massachusetts

: The following components are listed: Phosphoric acid, Potassium hydroxide; Sodium hydroxide

New York

: The following components are listed: Phosphoric acid, Potassium hydroxide; Sodium hydroxide

New Jersey

: The following components are listed: Phosphoric acid, Potassium hydroxide; Sodium hydroxide

Pennsylvania

: The following components are listed: Phosphoric acid, Potassium hydroxide; Sodium hydroxide

California Prop. 65

WARNING: This product contains less than 0.1% of a chemical known to the State of California to cause cancer.

WARNING: This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
1,4-Dioxane	Yes.	No.	Yes.	No.
Ethylene oxide	Yes.	Yes.	Yes.	Yes.
Propylene oxide	Yes.	No.	No.	No.

Canada

Canadian lists

Canadian NPRI

: The following components are listed: Phosphoric acid

CEPA Toxic substances

: None of the components are listed.

Canada inventory

: Not determined.

International lists

National inventory

Australia

: All components are listed or exempted.

China

: All components are listed or exempted.

Europe

: Not determined.

Japan

: Not determined.

Section 15. Regulatory information

Malaysia	: Not determined.
New Zealand	: All components are listed or exempted.
Philippines	: All components are listed or exempted.
Republic of Korea	: All components are listed or exempted.
Taiwan	: Not determined.

Section 16. Other information

History

Hazardous Material Information System (U.S.A)

Health : 2 Flammability : 1 Physical hazards : 0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J.J. Keller.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 2 Flammability : 0 Instability: 1

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History

Date of issue mm/dd/yyyy : 6/5/2015
Version : 1
Prepared by : KMK Regulatory Services Inc.

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