

SAFETY DATA SHEET

CERFA-KLEEN™ 5384

SDS according to the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200), Revision 2012

Section 1. Identification

Product code : 202490-01 DN
Product name : CERFA-KLEEN™ 5384
Other means of identification : Not available.

Relevant identified uses of the substance or mixture and uses advised against

Relevant uses : Cleaning product
Uses advised against : Any other purpose.

Supplier : Quaker Houghton PA, Inc.
901 E. Hector Street
Conshohocken, PA 19428 USA
T: 610-832-4000

Wallover Oil Company
21845 Drake Road
Strongsville, OH 44149 USA
www.wallover.com
T: (440) 238-9250

ProductStewardship@quakerhoughton.com
www.quakerhoughton.com

Emergency telephone number (with hours of operation) : CHEMTREC US/Canada: 1-800-424-9300 or 1-703-527-3887 (24 hours)

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture : SKIN CORROSION - Category 1
SERIOUS EYE DAMAGE - Category 1
TOXIC TO REPRODUCTION - Category 2

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : Causes severe skin burns and eye damage.
Suspected of damaging fertility or the unborn child.

Precautionary statements

Section 2. Hazards identification

Prevention	: Obtain special instructions before use. Wear protective gloves. Wear protective clothing. Wear eye or face protection.
Response	: Immediately call a POISON CENTER or doctor. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Storage	: Not applicable.
Disposal	: Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazards not otherwise classified	: None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
potassium hydroxide	≥25 - ≤33	1310-58-3
Alkali neutralized inorganic acid	≤10	-
boric acid	≤5	10043-35-3
Alkali stable surfactant	≤3	-

The exact percentage (concentration) of composition has been withheld as a trade secret

Section 4. First aid measures

Description of necessary first aid measures

General advice	: Get medical attention immediately. If medical advice is needed, have product container or label at hand. Use personal protective equipment as required. Remove contaminated clothing and wash it before reuse. Wash skin surfaces thoroughly after contact.
Inhalation	: Get medical attention immediately. Move affected person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
Skin contact	: Get medical attention immediately. Take off immediately all contaminated clothing. Rinse skin with water or shower.
Eye contact	: Get medical attention immediately. Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Remove contact lenses, if present and easy to do.
Ingestion	: Get medical attention immediately. May cause burns to mouth, throat and stomach. Ingestion may cause gastrointestinal irritation and diarrhea. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Inhalation	: Not expected under normal use.
Skin contact	: pain,redness,burns
Eye contact	: pain,redness,watering,burns
Ingestion	: May cause burns to mouth, throat and stomach.,stomach pains,nausea or vomiting

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

Notes to physician	: Treat symptomatically.
Specific treatments	: No specific treatment.

Section 4. First aid measures

- 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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Use personal protective equipment as required.

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire. Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.

- Hazardous thermal decomposition products** : In a fire, hazardous decomposition products may be produced. carbon oxides (CO, CO₂) nitrogen oxides metal oxide/oxides

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

- 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** : No action shall be taken involving any personal risk or without suitable training. Put on appropriate personal protective equipment (see Section 8). Keep unnecessary personnel away. Avoid breathing vapor or mist. Provide adequate ventilation.
- 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". Evacuate area.

- Environmental precautions** : Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Do not allow any potentially contaminated water, including rain water, runoff from fire fighting or spills, to enter any waterway, sewer or drain.

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. For large spills, dike spilled material or otherwise contain it to ensure runoff does not reach a waterway. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest.
- 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. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- 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. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
- Storage temperature** : Not available.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
potassium hydroxide	ACGIH TLV (United States, 3/2019). C: 2 mg/m ³ OSHA PEL 1989 (United States, 3/1989). CEIL: 2 mg/m ³ NIOSH REL (United States, 10/2016). CEIL: 2 mg/m ³
Alkali neutralized inorganic acid boric acid	None. ACGIH TLV (United States, 3/2019). TWA: 2 mg/m ³ 8 hours. Form: Inhalable fraction STEL: 6 mg/m ³ 15 minutes. Form: Inhalable fraction
Alkali stable surfactant	None.

- Appropriate engineering controls** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

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. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. 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. Keep equipment clean.

Section 8. Exposure controls/personal protection

- 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: Face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- 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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers.
- Other skin protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Thermal hazards** : Not expected under normal use. Not relevant/applicable due to nature of the product.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Amber.
- Odor** : Amine-like.
- Odor threshold** : Not available.
- pH** : 14.42
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Open cup: >100°C (>212°F)
- Evaporation rate** : 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** : 1.192
- Solubility** : Easily soluble in the following materials: cold water.
- Solubility in water** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.

VOC content

- Product** : 0 g/l ASTM E1868-10 (2021)

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: No specific measures identified.
Incompatible materials	: acids
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 : Based on available data, the classification criteria are not met.

Acute toxicity estimates

Route	ATE value
Oral	2093.31 mg/kg

Numerical measures of toxicity

Product/ingredient name	Result	Species	Dose	Exposure
potassium hydroxide	LD50 Oral	Rat	273 mg/kg	-
boric acid	LD50 Oral	Rat	3500 mg/kg	-

Irritation/Corrosion : Causes severe skin burns and eye damage.

Product/ingredient name	Result	Species	Score	Exposure	Observation
potassium hydroxide	Eyes - Moderate irritant	Rabbit	-	24 hours 1 mg	-
	Skin - Severe irritant	Guinea pig	-	24 hours 50 mg	-
	Skin - Severe irritant	Human	-	24 hours 50 mg	-
	Skin - Severe irritant	Rabbit	-	24 hours 50 mg	-
boric acid	Skin - Mild irritant	Human	-	72 hours 15 mg l	-

Sensitization : Based on available data, the classification criteria are not met.

Mutagenicity : Based on available data, the classification criteria are not met.

Carcinogenicity : Based on available data, the classification criteria are not met.

Reproductive toxicity : Suspected of damaging the unborn child.

Specific target organ toxicity (single exposure) : Based on available data, the classification criteria are not met.

Name	Category	Route of exposure	Target organs
Alkali stable surfactant	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure) : Based on available data, the classification criteria are not met.

Aspiration hazard : Based on available data, the classification criteria are not met.

Other information : None identified.

Section 11. Toxicological information

Information on the likely routes of exposure

Inhalation	: Severely irritating to the respiratory system.
Skin contact	: Causes burns.
Eye contact	: Causes serious eye damage.
Ingestion	: Causes digestive tract burns. May cause burns to mouth, throat and stomach.

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

Suspected of damaging the unborn child.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	: Not expected under normal use.
Skin contact	: pain,redness,burns
Eye contact	: pain,redness,watering,burns
Ingestion	: May cause burns to mouth, throat and stomach.,stomach pains,nausea or vomiting

Section 12. Ecological information

This material is harmful to aquatic life.

Toxicity

Product/ingredient name	Result	Species	Exposure
potassium hydroxide boric acid	Acute LC50 80 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours
	Acute EC50 >28 mg/l	Algae - Selenastrum capricornutum	72 hours
	Acute LC50 45.5 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia	48 hours
	Acute LC50 133000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 75 mg/l Marine water	Fish - Pagrus major	96 hours
	Chronic NOEC 6000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 2100 µg/l Fresh water	Fish - Oncorhynchus mykiss	87 days

Persistence and degradability

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
boric acid	-1.09	-	low

Mobility in soil




Soil/water partition coefficient (K _{oc})	: Not available.
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Other adverse effects	: No known significant effects or critical hazards.
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Section 13. Disposal considerations

Disposal methods : Disposal of this product, solutions and any by-products should at all times 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. Empty containers or liners may retain some product residues. Empty containers retain product residue and can be hazardous. Care should be taken when handling emptied containers that have not been cleaned or rinsed out.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	UN1814	UN1814	UN1814
UN proper shipping name	Potassium hydroxide, solution	POTASSIUM HYDROXIDE SOLUTION	Potassium hydroxide solution
Transport hazard class(es)	8 	8 	8 
Packing group	II	II	II
Environmental hazards	No.	No.	No.

Additional information

DOT Classification : **Reportable quantity** Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
Limited quantity Yes.
Packaging instruction Exceptions: 154. Non-bulk: 202. Bulk: 242.
Quantity limitation Passenger aircraft/rail: 1 L. Cargo aircraft: 30 L.
Special provisions B2, IB2, T7, TP2

IMDG : **Emergency schedules** F-A, S-B

IATA : **Quantity limitation** Passenger and Cargo Aircraft: 1 L. Packaging instructions: 851. Cargo Aircraft Only: 30 L. Packaging instructions: 855. Limited Quantities - Passenger Aircraft: 0.5 L. Packaging instructions: Y840.
Special provisions A3, A803

Special precautions for user : **Transport within user's premises:** always transport in 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 IMO instruments : Not available.

Section 15. Regulatory information

U.S. Federal regulations

Clean Water Act (CWA) 311

Ingredient name	CAS number
potassium hydroxide	1310-58-3

Clean Water Act (CWA) 307

None of the components are listed.

Section 15. Regulatory information

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)

None of the components are listed.

CERCLA: Hazardous substances.

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Reportable quantity : potassium hydroxide: 1000 lbs. (454 kg);

SARA 302/304

None of the components are listed.

SARA 311/312

Classification : See GHS Classification in section 2 for hazard class information

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

State regulations

Massachusetts : The following components are listed: POTASSIUM HYDROXIDE

New York : The following components are listed: Potassium hydroxide

New Jersey : The following components are listed: POTASSIUM HYDROXIDE; CAUSTIC POTASH; BORATE COMPOUNDS, Inorganic

Pennsylvania : The following components are listed: POTASSIUM HYDROXIDE

California

California Prop. 65

This product does not contain any Proposition 65 chemicals.

SCAQMD Rule 1144

The sale or distribution in the SCAQM District of California for metal working fluids or direct-contact lubricants is allowed if EITHER the VOC of the product itself OR the VOC of the diluted product at the point of use is less than the following limits: (1) 75 g VOC/L for metal forming, metal removal, metal treating; (2) 50 g VOC/L for metal protection, direct-contact lubricant. The VOC of this product as sold is:

Product as-supplied : 0 g/l ASTM E1868-10 (2021)

International regulations

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

United States : All components are active or exempted.

Canada : All components are listed or exempted.

Section 16. Other information

Date of issue/Date of revision	: 3/28/2021
Version	: 1.01 Quaker Houghton Product Stewardship
Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available SGG = Segregation Group UN = United Nations VOC = Volatile Organic Compound
References	: Safety data sheets of raw materials, global regulatory body information, scientific literature, and testing data .

▣ Indicates information that has changed from previously issued version.

Notice to reader

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