

# SAFETY DATA SHEET

COMMANDO

## Section 1. Identification

**Product identifier** : COMMANDO  
**Product code** : 17-08255 , 1000852 , 1000853  
**Product type** : Liquid.

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

#### Identified uses

Industrial applications: Warewash detergent.

#### Uses advised against

Only use this product as directed. Read label before using.

**Supplier's details** : Alpine Specialty Chemical Ltd.  
9 City View drive,  
Etobicoke, Ontario  
M9W 5A5

**Emergency telephone number (with hours of operation)** : 1-800-361-7691 (8am - 5pm Monday to Thursday) (8am - 4pm Friday)

## Section 2. Hazard identification

**Classification of the substance or mixture** : SKIN CORROSION - Category 1  
SERIOUS EYE DAMAGE - Category 1

### GHS label elements

#### Hazard pictograms



**Signal word** : Danger

**Hazard statements** : H314 - Causes severe skin burns and eye damage.

#### Precautionary statements

**General** : P101 - If medical advice is needed, have product container or label at hand.  
P102 - Keep out of reach of children.  
P103 - Read carefully and follow all instructions.

**Prevention** : P260 - Do not breathe vapor.  
P264 - Wash thoroughly after handling.  
P280 - Wear protective gloves: Chemical-resistant, impervious gloves . Wear protective clothing. Wear eye or face protection: Recommended: splash goggles.

**Response** : P301 + P310, P330, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting.  
P303 + P361 + P353, P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor.  
P304 + P340, P310 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor.  
P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

## Section 2. Hazard identification

	P363 - Wash contaminated clothing before reuse.
<b>Storage</b>	: P405 - Store locked up or keep under supervision.
<b>Disposal</b>	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Supplemental label elements</b>	:

## Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	: Mixture
<b>Other means of identification</b>	: Not available.

Ingredient name	% (w/w)	CAS number
Potassium hydroxide	≥7 - ≤13	CAS: 1310-58-3

Ranges if listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified 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

<b>Eye contact</b>	: In case of contact with eyes, flush with fresh water. Check for and remove any contact lenses. Continue rinsing. If irritation persists, get medical attention. Chemical burns must be treated promptly by a physician. Get medical attention if blistering occurs or redness persists.
<b>Inhalation</b>	: Move victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Get medical attention if adverse health effects persist or are severe. Maintain an open airway.
<b>Skin contact</b>	: Rinse with water. Remove contaminated clothing and wash it before reuse. Chemical burns must be treated promptly by a physician. Get medical attention if blistering occurs or redness persists.
<b>Ingestion</b>	: Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Chemical burns must be treated promptly by a physician. Get medical attention if symptoms occur.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

<b>Eye contact</b>	: May cause eye burn
<b>Inhalation</b>	: No known significant effects or critical hazards.
<b>Skin contact</b>	: May cause skin burns
<b>Ingestion</b>	: May cause burns to mouth, throat and stomach.

#### Over-exposure signs/symptoms

<b>Eye contact</b>	: Adverse symptoms may include the following: pain watering redness
<b>Inhalation</b>	: Adverse symptoms may include the following: respiratory tract irritation coughing

## Section 4. First-aid measures

- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur
- 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 should be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing them, or wear gloves.

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** : In a fire or if heated, a pressure increase will occur and the container may burst.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
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 should 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 should be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe 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 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Eye/face protection** : Continued or severe exposures might required to wear a face shield or chemical splash goggles. It is minimally suggested to wear safety glasses while using or handling this product.
- Hand protection** : It is suggested to wear chemical-resistant gloves while using or handling this product.
- Body protection** : No special protective clothing is required.

## Section 6. Accidental release measures

- Other skin protection** : 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** : No specific protective equipment required under normal use conditions.

**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

- Small spill** : Stop leak if without risk. Move containers from spill area. 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. 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. 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.

## 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. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from acids. 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. Remove contaminated clothing and protective equipment before entering eating areas. See Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Separate from acids. 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. Keep out of reach of children. Store away from incompatible materials;  
Reactive or incompatible with acids.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Potassium hydroxide	<p><b>CA Saskatchewan Provincial (Canada, 4/2021)</b> CEIL: 2 mg/m<sup>3</sup>.</p> <p><b>CA British Columbia Provincial (Canada, 9/2024)</b> C: 2 mg/m<sup>3</sup>.</p> <p><b>CA Ontario Provincial (Canada, 6/2019)</b> Ceiling Limit: 2 mg/m<sup>3</sup>.</p>

## Section 8. Exposure controls/personal protection

CA Quebec Provincial (Canada, 2/2024)

C: 2 mg/m<sup>3</sup>.

CA Alberta Provincial (Canada, 3/2023)

C: 2 mg/m<sup>3</sup>.

### Biological exposure indices

No exposure indices known.

**Appropriate engineering controls** : 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. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

**Eye/face protection** : Continued or severe exposures might required to wear a face shield or chemical splash goggles. It is minimally suggested to wear safety glasses while using or handling this product.

### Skin protection

**Hand protection** : It is suggested to wear chemical-resistant gloves while using or handling this product.

**Body protection** : No special protective clothing is required.

**Other skin protection** : 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** : No specific protective equipment required under normal use conditions.

## Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### Appearance

**Physical state** : Liquid.

**Color** : Red. [Transparent]

**Odor** : Odorless.

**Odor threshold** : Not available.

**pH** : 12 [Conc. (% w/w): 1%]

**Melting point/freezing point** : Not available.

**Boiling point or initial boiling point and boiling range** : Not available.

**Flash point** : Not available.

**Flammability** : Not available.

**Lower and upper explosion limit/flammability limit** : Not available.

**Vapor pressure** :

## Section 9. Physical and chemical properties and safety characteristics

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Water	17.5	2.3				

- Relative vapor density** : Not available.
- Relative density** : Not available.
- Density** : 1.2 g/cm<sup>3</sup>
- Solubility in water** : Not available.
- Partition coefficient: n-octanol/water** : Not applicable.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Dynamic (room temperature): Not available.  
Kinematic (room temperature): Not available.  
Kinematic (40°C (104°F)): Not available.

### Particle characteristics

- Median particle size** : Not applicable.

## 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** : May cause an exothermic reaction in presence of acids.
- Conditions to avoid** : No specific data.
- Incompatible materials** : Reactive or incompatible with 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

Product/ingredient name	Result	Species	Dose	Exposure
Potassium hydroxide	LD50 Oral	Rat	273 mg/kg	-

#### Irritation/Corrosion

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	-

#### Respiratory or skin sensitization

## Section 11. Toxicological information

Not available.

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

### Potential acute health effects

**Eye contact** : May cause eye burn  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : May cause skin burns  
**Ingestion** : May cause burns to mouth, throat and stomach.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:  
 pain  
 watering  
 redness  
**Inhalation** : Adverse symptoms may include the following:  
 respiratory tract irritation  
 coughing  
**Skin contact** : Adverse symptoms may include the following:  
 pain or irritation  
 redness  
 blistering may occur  
**Ingestion** : Adverse symptoms may include the following:  
 stomach pains

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

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

## Section 11. Toxicological information

Not available.

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

### Numerical measures of toxicity

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
COMMANDO potassium hydroxide	3349.4 500	15380.7 N/A	N/A N/A	N/A N/A	N/A N/A

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
potassium hydroxide	Acute LC50 80 ppm Fresh water	Fish - <i>Gambusia affinis</i> - Adult	96 hours

### Persistence and degradability

Not available.

### Bioaccumulative potential

Not available.

### Mobility in soil


- Soil/Water partition coefficient** : Not 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 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. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. 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 emptied 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. Transport information

	TDG Classification
UN number	UN3267
UN proper shipping name	Corrosive liquid, basic, organic, n.o.s. (potassium hydroxide)
Transport hazard class (es)	8 
Packing group	II
Environmental hazards	No.

### Additional information

**TDG Classification** : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.40-2.42 (Class 8).

**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

### Canadian lists

**Canadian NPRI** : None of the components are listed.

**CEPA Toxic substances** : None of the components are listed.

### Montreal Protocol

Not listed.

### Inventory list

**Canada** : Not determined.

**United States** : Not determined.

## Section 16. Other information

### History

**Date of printing** : 2025-12-17

**Date of issue/Date of revision** : 2025-12-17

**Date of previous issue** : 2025-12-16

**Version** : 0.05

## Section 16. Other information

### Key to abbreviations

: ATE = Acute Toxicity Estimate  
 BCF = Bioconcentration Factor  
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
 HPR = Hazardous Products Regulations  
 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

### Procedure used to derive the classification

Classification	Justification
SKIN CORROSION - Category 1 SERIOUS EYE DAMAGE - Category 1	On basis of test data On basis of test data

### References

: Not available.

✔ Indicates information that has changed from previously issued version.

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.