



1. Product and company identification

Product name Flexiclean

MSDS # 451334

Historic MSDS #: 11029-BE

Code 451334-US03

Product use Industrial Cleaner.
For specific application advice see appropriate Technical Data Sheet or consult our company representative.

Manufacturer Castrol Industrial North America, Inc.
150 W. Warrenville Road
Naperville, IL 60563

Supplier Castrol Industrial North America, Inc.
150 W. Warrenville Road
Naperville, IL 60563
Product Information: +1-877-641-1600

EMERGENCY SPILL INFORMATION: 1 (800) 424-9300 CHEMTREC (USA)

2. Hazards identification

Physical state Liquid.

Color Yellow./Amber.

Emergency overview DANGER !

CAUSES RESPIRATORY TRACT, DIGESTIVE TRACT, EYE AND SKIN BURNS.
HARMFUL IF SWALLOWED.

Harmful if swallowed. Do not breathe vapor or mist. Do not ingest. Do not get in eyes or on skin or clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Routes of entry Dermal contact. Eye contact. Inhalation. Ingestion.

Potential health effects

Eyes Corrosive to eyes. Causes burns.

Skin Corrosive to the skin. Causes skin burns.

Inhalation Causes respiratory tract burns.

Ingestion Harmful if swallowed. Corrosive to the digestive tract. Causes burns.

See toxicological information (section 11)

3. Composition/information on ingredients

Ingredient name	CAS #	%
Potassium hydroxide	1310-58-3	5 - 10
Ethanolamine; 2-Aminoethanol	141-43-5	1 - 5
Alkali metal salts of phosphonic acids	Not available.	1 - 5
sodium silicate	1344-09-8	1 - 5
Alkali metal salts of carboxylic acids	Not available.	1 - 5

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4. First aid measures

Eye contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Chemical burns must be treated promptly by a physician. Get medical attention immediately.
Skin contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Clean shoes thoroughly before reuse. Wash contaminated clothing before reuse. Chemical burns must be treated promptly by a physician. Get medical attention immediately.
Inhalation	If inhaled, remove to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Ingestion	Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Chemical burns must be treated promptly by a physician. Get medical attention immediately.

5. Fire-fighting measures

Fire/explosion hazards	In a fire or if heated, a pressure increase will occur and the container may burst.
Extinguishing media	
Suitable	Use an extinguishing agent suitable for the surrounding fire.
Not suitable	Do not use water jet.
Fire-fighting procedures	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.
Hazardous combustion products	Combustion products may include the following: phosphorus oxides metal oxide/oxides carbon oxides (CO, CO ₂) (carbon monoxide, carbon dioxide) nitrogen oxides (NO, NO ₂ etc.)
Protective clothing (fire)	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions	No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. In accordance with good industrial hygiene and safety work practices, airborne exposures should be controlled to the lowest extent practicable. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
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 for cleaning up	
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. 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 section 1 for emergency contact information and section 13 for waste disposal.
Small spill	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

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7. Handling and storage

Handling	Put on appropriate personal protective equipment (see section 8). Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep away from acids.
Storage	Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10). 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.
Other information	DO NOT ADD NITRITES TO THIS FLUID.

8. Exposure controls/personal protection

Occupational exposure limits

Ingredient name	Occupational exposure limits
Potassium hydroxide	ACGIH TLV (United States). C: 2 mg/m ³ Issued/Revised: 9/1994
Ethanolamine; 2-Aminoethanol	ACGIH TLV (United States). STEL: 15 mg/m ³ 15 minute(s). Issued/Revised: 9/1994 STEL: 6 ppm 15 minute(s). Issued/Revised: 9/1994 TWA: 7.5 mg/m ³ 8 hour(s). Issued/Revised: 9/1994 TWA: 3 ppm 8 hour(s). Issued/Revised: 9/1994 OSHA PEL (United States). TWA: 6 mg/m ³ 8 hour(s). Issued/Revised: 6/1993 TWA: 3 ppm 8 hour(s). Issued/Revised: 6/1993

While specific OELs for certain components may be shown in this section, other components may be present in any mist, vapor or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

Some states may enforce more stringent exposure limits.

Control Measures	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.
Hygiene measures	Ensure that eyewash stations and safety showers are close to the workstation location. 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.

Personal protection

Eyes	Do not get in eyes. Wear face shield.
Skin and body	Do not get on skin or clothing. Wear clothing and footwear that cannot be penetrated by chemicals or oil. Wear face shield.
Respiratory	Use adequate ventilation. Do not breathe vapor or mist.
Hands	The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

9. Physical and chemical properties

Physical state	Liquid.
Color	Yellow./Amber.
Density	1162 kg/m ³ (1.162 g/cm ³) at 15.6°C
pH	12.3 [Conc. (% w/w): 3%]

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10. Stability and reactivity

Stability and reactivity	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	Not available.
Incompatibility with various substances	Reactive or incompatible with the following materials: oxidizing materials and acids.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization	Under normal conditions of storage and use, hazardous polymerization will not occur.

11. Toxicological information

Acute toxicity

Other Toxicity Data

Contains material that may cause target organ damage, based on animal data.
Target Organs: central nervous system (CNS), liver and kidneys.

Other information

Alkanolamine: This product contains an alkanolamine. In all metalworking fluids containing amines, there is a potential for forming nitrosamines which are animal carcinogens. Therefore, no nitrites or related nitrosating agents should be added to such compositions.

Potential chronic health effects

Carcinogenicity

No known significant effects or critical hazards.

12. Ecological information

Ecotoxicity

No testing has been performed by the manufacturer.

13. Disposal considerations

Waste information

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

NOTE: The generator of waste has the responsibility for proper waste identification (based on characteristic(s) or listing), transportation and disposal

14. Transport information

International transport regulations

Regulatory information	UN number	Proper shipping name	Class	Packing group	Additional information
DOT Classification	UN1760	Corrosive liquid, n.o.s. (Potassium hydroxide, Ethanolamine; 2-Aminoethanol)	8	III	-

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Regulatory information	UN number	Proper shipping name	Class	Packing group	Additional information
TDG Classification	UN1760	Corrosive liquid, n.o.s. (Potassium hydroxide, Ethanolamine; 2-Aminoethanol)	8	III	-
IMDG Classification	UN1760	Corrosive liquid, n.o.s. (Potassium hydroxide, Ethanolamine; 2-Aminoethanol)	8	III	-
IATA/ICAO Classification	UN1760	Corrosive liquid, n.o.s. (Potassium hydroxide, Ethanolamine; 2-Aminoethanol)	8	III	-

15. Regulatory information

U.S. Federal Regulations

United States inventory (TSCA 8b)

All components are listed or exempted.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: Potassium hydroxide; Ethanolamine; 2-Aminoethanol

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Flexiclean: Immediate (acute) health hazard, Delayed (chronic) health hazard

SARA 313

Form R - Reporting requirements

This product does not contain any hazardous ingredients at or above regulated thresholds.

Supplier notification

This product does not contain any hazardous ingredients at or above regulated thresholds.

CERCLA Sections 102a/103 Hazardous Substances (40 CFR Part 302.4):

CERCLA: Hazardous substances.: Potassium hydroxide: 1000 lbs. (454 kg); Ethylene oxide: 10 lbs. (4.54 kg); Propylene oxide: 100 lbs. (45.4 kg); 1,4-dioxane: 100 lbs. (45.4 kg); Formaldehyde.: 100 lbs. (45.4 kg);

State regulations

Massachusetts Substances

The following components are listed: ETHANOLAMINE; POTASSIUM HYDROXIDE

New Jersey Hazardous Substances

The following components are listed: ETHANOLAMINE; ETHANOL, 2-AMINO-; POTASSIUM HYDROXIDE; CAUSTIC POTASH

Pennsylvania RTK Hazardous Substances

The following components are listed: ETHANOL, 2-AMINO-; POTASSIUM HYDROXIDE (K(OH))

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer. Formaldehyde.; 1,4-dioxane; Propylene oxide

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. Ethylene oxide

Inventories

Canada inventory

At least one component is not listed.

Europe inventory

All components are listed or exempted.

Australia inventory (AICS)

At least one component is not listed.

China inventory (IECSC)

All components are listed or exempted.

Japan inventory (ENCS)

All components are listed or exempted.

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Korea inventory (KECI)

All components are listed or exempted.

Philippines inventory (PICCS)

At least one component is not listed.

16. Other information

Label requirements

DANGER !

CAUSES RESPIRATORY TRACT, DIGESTIVE TRACT, EYE AND SKIN BURNS.
HARMFUL IF SWALLOWED.

HMIS® Rating :

Health * 3
Flammability 1
Physical Hazard 0
Personal protection D

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



History

Date of issue

09/13/2010.

Date of previous issue

No previous validation.

Prepared by

Product Stewardship

Notice to reader

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from us.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken.

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