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Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

Product name MORADO SUPER CLEANER
Product use Heavy Duty Cleaner
Product code 0856
Date of issue 10/15/15 **Supersedes** 11/20/12

Emergency Telephone Numbers

For MSDS Information:

Technical Services Group
Telephone (780) 453-8100
(Business Hours 8:00am - 5:00pm)

For Medical or Transportation Emergency

CANUTEC (24 Hours)
(613) 996-6666 - Call Collect

Prepared By

Technical Services Group
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Section 2. Hazards Identification

Emergency overview

WARNING!

HARMFUL IF SWALLOWED.

Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Contains material that may cause target organ damage, based on animal data. Wash thoroughly after handling.

NOTE: MSDS data pertains to the product as delivered in the original shipping container(s). Risk of adverse effects are lessened by following all prescribed safety precautions, including the use of proper personal protective equipment.

Acute Effects **Routes of Entry** Dermal contact. Eye contact. Inhalation.

Eyes Severely corrosive to the eyes. Causes severe burns. Direct contact with the eyes can cause irreversible damage, including blindness.

Skin Severely corrosive to the skin. Causes severe burns.

Inhalation Inhalation of the spray or mist may produce severe irritation of respiratory tract, characterized by coughing, choking or shortness of breath.

Ingestion Toxic if swallowed. May cause burns to mouth, throat and stomach.

Chronic effects Contains material which may cause damage to the following organs: blood, kidneys, liver, upper respiratory tract, skin, eyes, central nervous system (CNS).
Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray or mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.

Additional Information: See Toxicological Information (Section 11)

Section 3. Composition/Information on Ingredients

<u>Name of Hazardous Ingredients</u>	<u>CAS number</u>	<u>% by Weight</u>
ETHYLENE GLYCOL MONOBUTYL ETHER; 2-butoxyethanol; butyl cellosolve	111-76-2	1 - 5
SODIUM HYDROXIDE; caustic soda; soda lye	1310-73-2	1 - 5
SODIUM METASILICATE; silicic acid (H2-Si-O3) disodium salt; water glass	6834-92-0	1 - 5

Section 4. First Aid Measures

Eye Contact	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
Skin Contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
Inhalation	Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
Ingestion	Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If affected person is conscious, give plenty of water to drink. Get medical attention immediately.

Section 5. Fire Fighting Measures

Flash Point	Closed cup: >93.3°C (>199.9°F) [Tagliabue.]
Flammable Limits	Not available.
Flammability	Aqueous solutions are non-flammable.
Auto-ignition Temperature	
Fire-Fighting Procedures	In case of fire, use water spray (fog), foam, dry chemical or CO ₂ . Fire-fighters should wear appropriate protective equipment.
Fire hazard	In a fire or if heated, a pressure increase will occur and the container may burst.
Products of Combustion	Decomposition products may include the following materials: carbon dioxide carbon monoxide metal oxide/oxides
Explosion hazard	Not available.

Section 6. Accidental Release Measures

Spill Clean up	Put on appropriate personal protective equipment (see section 8). Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, 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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Section 7. Handling and Storage

Handling	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. Empty containers retain product residue and can be hazardous. Do not reuse container. Wash thoroughly after handling.
Storage	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. Store between the following temperatures: 40°F - 120°F (4.4°C - 49°C). 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. Keep out of the reach of children.

Section 8. Exposure Controls/Personal Protection**Product name**

2-butoxyethanol

Exposure limits

CA Alberta Provincial (Canada, 4/2009). Skin sensitizer.

8 hrs OEL: 97 mg/m³ 8 hour(s).

8 hrs OEL: 20 ppm 8 hour(s).

CA British Columbia Provincial (Canada, 9/2010).

TWA: 20 ppm 8 hour(s).

CA Ontario Provincial (Canada, 7/2010). Absorbed through skin.

TWA: 20 ppm 8 hour(s).

CA Quebec Provincial (Canada, 6/2008).

TWAEV: 20 ppm 8 hour(s).

TWAEV: 97 mg/m³ 8 hour(s).

ACGIH TLV (United States).

CEIL: 2 mg/m³

Sodium Hydroxide

Personal Protective Equipment (PPE)

Eyes Splash goggles. Face shield.

Hands and Body Wear appropriate protective clothing to prevent skin contact. Recommended: Chemical-resistant gloves. Neoprene, Nitrile, latex rubber. Chemical-resistant apron. Chemical resistant boots.

Respiratory Use with adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Wear appropriate respirator when ventilation is inadequate.



Section 9. Physical and Chemical Properties

Physical State	Liquid. [Clear to slightly hazy.]	Color	Purple.
pH	13.0-14.0	Odor	Ethereal.
Boiling Point	98.9°C (210°F)	Vapor Pressure	Not determined.
Specific Gravity	1.06	Vapor Density	>1 [Air = 1]
Solubility	Easily soluble in the following materials: cold water and hot water.	Evaporation Rate	>1 (Water = 1)
Freezing Point	May start to solidify at 20°C (68°F) based on data for: SXS-40%. Weighted average: -3.77°C (25.2°F)	VOC (Consumer)	42 (g/l). (3.98%. 0.35 lbs/gal)

Section 10. Stability and Reactivity

Stability and Reactivity The product is stable.

Incompatibility Reactive or incompatible with the following materials: oxidizing materials, metals and acids.

Hazardous Polymerization Under normal conditions of storage and use, hazardous polymerization will not occur.

Hazardous Decomposition Products Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological Information

Carcinogenicity Ingredients: Not listed as carcinogen by OSHA, NTP or IARC.

Acute Toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-butoxyethanol	LC50 Inhalation Gas.	Rat	450 ppm	
	LC50 Inhalation Vapor	Guinea pig	>633 ppm	
	LD50 Dermal	Guinea pig	>2000 mg/kg	
	LD50 Dermal	Rabbit	220 mg/kg	
	LD50 Oral	Guinea pig	1200 mg/kg	
	LD50 Oral	Rat	250 mg/kg	
Sodium Hydroxide	LD50 Dermal	Rabbit	>2000 mg/kg	
	LD50 Oral	Rat	500 mg/kg	
disodium metasilicate	LD50 Oral	Mouse	770 mg/kg	
	LD50 Oral	Rat	1153 mg/kg	
	LD50 Oral	Rat	1153 mg/kg	

Section 12. Ecological Information

Environmental Effects No known significant effects or critical hazards.

Aquatic Ecotoxicity


Product/ingredient name	Test	Result	Species	Exposure
2-butoxyethanol	-	Acute EC50 >1000 mg/L Fresh water	Daphnia - Water flea - Daphnia magna -	48 hours <24 hours
	-	Acute LC50 800000 ug/L Marine water	Crustaceans - Common shrimp, sand shrimp - Crangon crangon	48 hours
	-	Acute LC50 1250000 ug/L Marine water	Fish - Inland silverside - Menidia beryllina -	96 hours 40 to 100 mm
Sodium Hydroxide	-	Acute LC50 25 ppm	Fish - Trout	24 hours
	-	Acute EC50 33.53 mg/L Fresh water	Crustaceans - Water flea - Ceriodaphnia dubia - Neonate -	48 hours <24 hours

Section 13. Disposal Considerations**Waste Information**

Waste must be disposed of in accordance with applicable regulations. Consult your local or regional authorities for additional information.

Waste Stream Code: - D002
 Classification: - [Hazardous waste.]
 Origin: - [RCRA waste.]

Section 14. Transport Information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
TDG Classification	3266	Corrosive liquid, basic, inorganic, n.o.s. (Sodium Hydroxide)	8	II		<u>Explosive Limit and Limited Quantity Index</u> 1
IMDG Class	Not available.	Not available.	Not available.	-		-

NOTE: DOT classification applies to most package sizes. For specific container size classifications or for size exceptions, refer to the Bill of Lading with your shipment. Limited Quantity: Small quantities of controlled goods are not regulated as Dangerous Goods according to TDG regulations.

PG* : Packing group

Section 15. Regulatory Information**Canada**

WHMIS (Canada) Class D-2B: Material causing other toxic effects (Toxic).
 Class E: Corrosive material

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Section 16. Other Information

*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.*