



ZEP Manufacturing Company
 Acuity Specialty Products Group, Inc.
 P.O. Box 2015
 Atlanta, GA 30301
 1-877-I-BUY-ZEP (428-9937)
 www.zep.com

Material Safety Data Sheet

and Safe Handling and Disposal Information

Section 1. Chemical Product and Company Identification

Product name ZEP FORMULA 448
Product Use Coil Cleaner
Product Code 1203
Date of issue 08/02/05 **Supersedes** 03/26/01

Emergency Telephone Numbers For MSDS Information:
 Acuity Specialty Products Group, Inc.
Compliance Services 1-877-I-BUY-ZEP (428-9937)

For Medical Emergency
 INFOTRAC:
(877) 541-2016 Toll Free - All Calls Recorded

For a Transportation Emergency
 CHEMTREC:
(800) 424-9300 - All Calls Recorded
In the District of Columbia (202) 483-7616

Printing date: 08/02/05

Prepared by Compliance Services Group
 Acuity Specialty Products Group
 1420 Seaboard Industrial Blvd.
 Atlanta, GA 30318

Section 2. Composition, Information on Ingredients

Name of Hazardous Ingredients	CAS #	% by Weight	Exposure Limits
ETHYLENE GLYCOL MONOBUTYL ETHER; 2-butoxyethanol; butyl cellosolve	111-76-2	1 - 5	ACGIH TLV (United States). TWA: 20 ppm 8 hour(s).
SODIUM METASILICATE; silicic acid (H2-Si-O3) disodium salt; water glass	6834-92-0	1 - 5	OSHA PEL (United States). Skin TWA: 50 ppm 8 hour(s).
SODIUM TRIPOLYPHOSPHATE	7758-29-4	1 - 5	Supplier Suggested (United States). CEIL: 2 mg/m ³
SODIUM DODECYLBENZENE SULFONATE; linear alkyl aryl sodium sulfonate; Sodium DDBSA	25155-30-0	1 - 5	ACGIH TLV / OSHA PEL (United States). TWA: 5 mg/m ³ 8 hour(s). Not established

Section 3. Hazards Identification

Acute Effects

Routes of Entry Dermal contact. Eye contact. Inhalation.

Skin Hazardous in case of skin contact (irritant, permeator). Direct contact may cause irritation and redness. Harmful if absorbed through the skin. Skin inflammation is characterized by itching, scaling, or reddening.

Eyes Hazardous in case of eye contact (corrosive). Causes eye burns. Liquid in eye may cause irritation with possible damage if not rinsed immediately.

Inhalation Hazardous in case of inhalation. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Over-exposure by inhalation may cause respiratory irritation. Can cause central nervous system depression.

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

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

HMIS

Health	2
Fire Hazard	0
Reactivity	0
Personal Protection	B

Carcinogenic Effects

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

Chronic Effects

Overexposure of this product by inhalation or absorption can produce central nervous system depression resulting in headache, nausea and/or dizziness. The substance may be toxic to blood, kidneys, liver, upper respiratory tract, skin, eyes, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.

See Toxicological Information (section 11)

Section 4. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin Contact	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if irritation develops.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion	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	Not applicable.	Flammable Limits	Not applicable.
Flammability	Non-flammable.		
Fire Hazard	Not applicable.		
Fire-Fighting Procedures	Not applicable.		

**Section 6. Accidental Release Measures**

Spill Clean up	Put on appropriate personal protective equipment (see Section 8). Absorb with an inert material and place in an appropriate waste disposal container. To clean the floor and all objects contaminated by this material, use detergent. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
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Section 7. Handling and Storage

Handling	Avoid contact with eyes, skin and clothing. Avoid breathing vapors or spray mists. Use only with adequate ventilation. Do not ingest. Wash thoroughly after handling.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area. Store between 40°F - 120°F (4.4°C - 49°C). Protect from freezing. Keep away from food, drink and animal feeding stuffs. Keep out of the reach of children.

Section 8. Exposure Controls, Personal Protection

	Personal Protection	Protective Clothing (Pictograms)
Eyes	Splash goggles.	
Body	Recommended: Nitrile gloves. Neoprene gloves. Rubber gloves.	
Respiratory	Use with adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Wear appropriate respirator when ventilation is inadequate.	

Section 9. Physical and Chemical Properties

Physical State	Liquid.	Color	Clear. Blue. (Dark.)
pH	12.5 - 13.5	Odor	Butyl (Slight.)
Boiling Point	104.4°C (219.9°F)	Vapor Pressure	Not determined.
Specific Gravity	1.07 (Water = 1)	Vapor Density	Not determined.
Solubility	Easily soluble in cold water.	Evaporation Rate	1 compared to water
		VOC (Consumer)	42.3 (g/l). 0.35 lbs/gal 3.96%

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Incompatibility	Reactive with oxidizing agents, acids.
Hazardous Polymerization	Will not occur.
Hazardous Decomposition Products	carbon oxides (CO, CO ₂)

Section 11. Toxicological Information

Toxicity to Animals	Ethylene Glycol Monobutyl Ether:
	ORAL (LD50): Acute: 1746 mg/kg [Rat].
	DERMAL (LD50): Acute: 680 mg/kg [Rabbit].
	VAPOR (LC50): Acute: 450 ppm 4 hour(s) [Rat (Female)].
	Sodium Metasilicate:
	ORAL (LD50): Acute: 1153 mg/kg [Rat]. 770 mg/kg [Mouse].
	Sodium Tripolyphosphate:
	ORAL (LD50): Acute: 5400 mg/kg [Rat].
	DERMAL (LD50): Acute: >7940 mg/kg [Rabbit].
	Sodium Dodecylbenzene Sulfonate:
	ORAL (LD50): Acute: 1260 mg/kg [Rat]. 2000 mg/kg [Mouse].

Section 12. Ecological Information**Ecotoxicity** Not available.**Biodegradable/OECD** Not available.**Section 13. Disposal Considerations**

Waste Information Waste must be disposed of in accordance with federal, state and local environmental control regulations. **Waste Stream** Code: D002
Classification: - (Hazardous waste.)
Origin: - (RCRA waste.)

Consult your local or regional authorities.

Section 14. Transport Information**Proper shipping name** Not applicable.**DOT Classification** Not a DOT controlled material (United States).**UN number** Not regulated.

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.

Section 15. Regulatory Information**U.S. Federal Regulations** SARA 313 toxic chemical notification and release reporting:

Ethylene Glycol Monobutyl Ether

Clean Water Act (CWA) 311: Sodium Dodecylbenzene Sulfonate. RQ 5000 lbs. (2268 kg)

Clean air act (CAA) 112 regulated toxic substances: Ethylene Glycol Monobutyl Ether

All Components of this product are listed or exempt from listing on TSCA inventory.

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.