



**ZEP MANUFACTURING COMPANY**  
Acuity Specialty Products Group, Inc.  
P.O. BOX 2015  
ATLANTA, GA 30301  
1- 877- I - BUY- ZEP

## Material Safety Data Sheet and Safe Handling and Disposal Information

### Section 1. Chemical Product and Company Identification

**Product name** **Brake Wash (AEROSOL)**

**Product Use** Aerosol Industrial Degreaser

**Product Code** 0287

**Date of issue** 5/16/03 **Supersedes** 01/08/01

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

**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**

FROST BENCO ELECTRIC  
HIWAY 169 SIUTH  
P O BOX 8  
MANKATO MN 56001

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### Section 2. Composition, Information on Ingredients

Name of Hazardous Ingredients	CAS #	% by Weight	Exposure Limits
HEXANE; n-hexane	110-54-3	80-90	OSHA PEL (United States). TWA: 500 ppm ACGIH TLV (United States). TWA: 50 ppm Supplier Suggested PEL (United States). TWA: 50 ppm
ISOPROPYL ALCOHOL; ipa; dimethylcarbinol; 2-propanol	67-63-0	5-15	ACGIH/OSHA (United States). TWA: 400 ppm STEL: 500 ppm
METHANOL; methyl alcohol; wood alcohol; columbia spirits	67-56-1	<5	OSHA/ACGIH (United States). TWA: 200 ppm OSHA /ACGIH (United States). STEL: 250 ppm

### Section 3. Hazards Identification

Acute Effects	Routes of Entry
<b>Skin</b> Hazardous in case of skin contact (irritant, permeator). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Product may be dermal absorbed. Can cause CNS depression. Symptoms and signs include headaches, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Non-sensitizer for skin. Medical Conditions Aggravated by Overexposure: Skin.	Inhalation. Absorbed through skin.
<b>Eyes</b> Hazardous in case of eye contact (irritant). Inflammation of the eye is characterized by redness, watering, and itching.	
<b>Inhalation</b> Hazardous in case of inhalation (lung irritant). Over-exposure by inhalation may cause respiratory irritation. Can cause CNS depression. Symptoms and signs include headaches, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Medical Conditions Aggravated by Overexposure: Respiratory.	
<b>Ingestion</b> No data on acute toxicity of the product when ingested. Aspiration hazard if swallowed- can enter lungs and cause damage.	

HMIS	
Health	2
Physical Hazard	4
Reactivity	0
Personal Protection	B, X

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

**Chronic Effects** Defatting to the skin. Prolonged skin contact may cause dermatitis with drying and cracking of skin. Contains n-hexane which may cause peripheral nerve damage. The substance may be toxic to kidneys, lungs, liver, heart, peripheral nervous system, central nervous system (CNS), pancreas. Repeated or prolonged exposure to the substance can produce target organs damage.

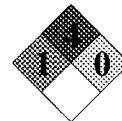
See Toxicological Information (section 11)

**Section 4. First Aid Measures**

<b>Eye Contact</b>	Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention.
<b>Skin Contact</b>	Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Cover the irritated skin with an emollient. Get medical attention if irritation develops.
<b>Inhalation</b>	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
<b>Ingestion</b>	Aspiration hazard if swallowed- can enter lungs and cause damage. Do NOT induce vomiting unless directed to do so by medical personnel. If vomiting occurs, keep head lower than hips to help prevent aspiration. NEVER give an unconscious person anything to ingest. Get medical attention immediately.

**Section 5. Fire Fighting Measures**

<b>Flash Point</b>	Not determined. Extremely flammable liquid and vapor.	<b>Flammable Limits</b> LOWER: 1.2% UPPER: 7.8%
<b>Flammability</b>	Extremely flammable. (CSMA) Aerosol that may flashback.	
<b>Fire Hazard</b>	FLAMMABLE LIQUID AND VAPOR. Vapor may cause flash fire. Container explosion may occur under fire conditions or when heated.	
<b>Fire-Fighting Procedures</b>	Use dry chemical or CO <sub>2</sub> . Wear special protective clothing and positive pressure, self-contained breathing apparatus. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.	

**Section 6. Accidental Release Measures**

<b>Spill Clean up</b>	Large spills are unlikely due to packaging.
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**Section 7. Handling and Storage**

<b>Handling</b>	Extremely flammable liquid and vapor. Store and use away from heat, sparks, open flame, or any other ignition source. Avoid contact with eyes, skin and clothing. Avoid breathing vapors or spray mists. Use only with adequate ventilation. Wash thoroughly after handling. Wash contaminated clothing before reusing.
<b>Storage</b>	Store and use away from heat, sparks, open flame, or any other ignition source. Keep away from heat and direct sunlight. Keep container in a cool, well-ventilated area. Do not store above 120°F (49°C). Do not puncture or incinerate. Keep out of the reach of children.

**Section 8. Exposure Controls, Personal Protection**

Personal Protection		Protective Clothing (Pictograms)
<b>Eyes</b>	Safety glasses with side shields.	
<b>Body</b>	Nitrile gloves. Neoprene gloves. Recommended: Synthetic apron.	
<b>Respiratory</b>	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. Approved/certified respirator with organic vapor cartridges.	

**Section 9. Physical and Chemical Properties**

<b>Physical State</b>	Liquid. (Aerosol.)	<b>Color</b> Clear
<b>pH</b>	Not applicable.	<b>Odor</b> Hydrocarbon. (Slight.)
<b>Boiling Point</b>	Not determined.	<b>Vapor Pressure</b> 17.9 kPa (134 mmHg) (at 20°C)
<b>Specific Gravity</b>	0.67 (Water = 1)	<b>Vapor Density</b> >1 (Air = 1)
<b>Solubility</b>	Insoluble in cold water, hot water.	<b>Evaporation Rate</b> Not determined.
		<b>VOC (Consumer)</b> 95.2%

**Section 10. Stability and Reactivity**

<b>Stability and Reactivity</b>	The product is stable.
<b>Incompatibility</b>	Avoid contact with strong oxidizers, excessive heat, sparks or open flame.
<b>Hazardous Polymerization</b>	Will not occur.
<b>Hazardous Decomposition Products</b>	Carbon Dioxide, Carbon Monoxide and Other organic materials.

**Section 11. Toxicological Information**

<b>Toxicity to Animals</b>	<b>Isopropyl Alcohol:</b>
	ORAL (LD50): Acute: 5045 mg/kg [Rat].
	<b>Methanol:</b>
	ORAL (LD50): Acute: 5628 mg/kg [Rat].

**Section 12. Ecological Information**

<b>Ecotoxicity</b>	Not available.
<b>Biodegradable/OECD</b>	Not available.

**Section 13. Disposal Considerations**

<b>Waste Information</b>	Waste must be disposed of in accordance with federal, state and local environmental control regulations.	<b>Waste Stream Code:</b> D001
		<b>Classification:</b> - (Hazardous waste.)
		<b>Origin:</b> - (RCRA waste.)

Consult your local or regional authorities.

**Section 14. Transport Information**

Proper shipping name      Consumer Commodity  
DOT Classification      ORM-D

UN number      Limited Quantity  
ORM-D Not regulated.

**Section 15. Regulatory Information**

U.S. Federal Regulations      SARA 313 toxic chemical notification and release reporting: Hexane ; Methanol  
Clean Water Act (CWA) 311: No products were found.  
Clean air act (CAA) 112 regulated toxic substances: Hexane; Methanol

**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.*

## MATERIAL SAFETY DATA SHEET

### NOTICE

Thank you for your interest in, and use of, this product. Acuity Specialty Products Group is pleased to be of service to you by supplying this Material Safety Data Sheet for your files. Acuity Specialty Products Group is concerned for your health and safety. This product and all others supplied by Acuity Specialty Products Group companies can be used safely with proper protective equipment and proper handling practices consistent with label instructions and the MSDS. Before using any this product, be sure to read the complete label and the Material Safety Data Sheet.

As a further word of caution, Acuity Specialty Products Group wishes to advise that serious accidents have resulted from the misuse of "emptied" containers. "Empty" containers retain residue (liquid and/or vapor) and can be dangerous. DO NOT pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks, or other sources of ignition; they may explode or develop harmful vapors and possibly cause injury or death. Clean empty containers by triple rinsing with water or an appropriate solvent. Empty containers must be sent to a drum reconditioner before reuse.

### TERMS AND ABBREVIATIONS

#### Listed Alphabetically by Section

#### SECTION II: HAZARDOUS INGREDIENTS

**CAR:** Carcinogen - A chemical listed by the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC) or OSHA as a definite or possible human cancer causing agent.

**CAS#:** Chemical Abstract Services Registry Number - A universally accepted numbering system for chemical substances.

**CBL:** Combustible - At temperatures between 100°F and 200°F chemical gives off enough vapor to ignite if a source of ignition is present as tested with a closed cup tester.

**CNS:** Central Nervous System depressant that reduces the activity of the brain and spinal cord.

**COR:** Corrosive - Causes irreversible injury to living tissue (e.g. burns).

**DESIGNATIONS:** Chemical and common names of hazardous ingredients.

**EIR:** Eye Irritant Only - Causes reversible reddening and/or inflammation of eye tissues.

**EXPOSURE LIMITS:** The time weighted average (TWA) airborne concentration at which most workers can be exposed without any expected adverse effects. Primary sources include ACGIH TLVs, and OSHA PELs.

**ACGIH:** American Conference of Governmental Industrial Hygienists

**CEILING:** "The concentration that should not be exceeded in the workplace during any part of the working exposure." Source, ACGIH

**OSHA:** Occupational Safety and Health Administration.

**PEL:** Permissible Exposure Limit - A set of time weighted average exposure values, established by OSHA, for a normal 8-hour day and a 40-hour work-week.

**PPM:** Parts per million - unit of measure for exposure limits.

**(S) SKIN:** Skin contact with substance can contribute to overall exposure.

**STEL:** Short Term Exposure Limit - Maximum concentration for a continuous 15-minute exposure period.

**TLV:** Threshold Limit Value - A set of time weighted average exposure limits, established by the ACGIH, for a normal 8-hour day and a 40-hour work-week.

**FBL:** Flammable - At temperatures under 100°F, chemical gives off enough vapors to ignite if a source of ignition is present as tested with a closed cup tester.

**HAZARDOUS INGREDIENTS:** Chemical substances that are determined to be potential health or physical hazards based on the criteria established in the OSHA Hazard Communication Standard - 29 CFR 1910.1200

**HTX:** Highly toxic - the probable lethal dose for a 70 kg (150 lb.) man, which may be approximated as less than 6 teaspoons (2 tablespoons)

**IRR:** Irritant - Causes reversible effects in living tissues (e.g. inflammation) - primarily skin and eyes.

**N/A:** Not Applicable - Category is not appropriate for this product.

**N/D:** Not Determined - Insufficient information to make a determination for this item.

**RTCS#:** Registry of Toxic Effects of Chemical Substances - an unreviewed listing of published toxicology data on chemical substances.

**SARA:** Superfund Amendment and Reauthorization Act - Section 313 designates certain chemicals for possible reporting for the Toxic Chemical Release Inventory.

**SEN:** Sensitizer - Causes allergic reaction after repeated exposure.

**TOX:** Toxic - The probable lethal dose for a 70 kg (150 kg) man is one ounce (2 tablespoons) or more.

#### SECTION III: HEALTH HAZARD DATA

**ACUTE EFFECT:** An adverse effect on the human body from a single exposure with symptoms developing almost immediately after exposure or within a relatively short time.

**CHRONIC EFFECT:** Adverse effects that are most likely to occur from repeated exposure over a long period of time.

**EST'D PEL/TLV:** This estimated, time-weighted-average, exposure limit, developed by using a formula provided by the ACGIH, pertains to airborne concentrations from the product as a whole. This value should serve as guide for providing safe workplace conditions to nearly all workers.

**HMIS CODES:** Hazardous Material Identification System - a rating system developed, by the National Paint and Coating Association for estimating the hazard potential of a chemical under normal workplace conditions. These risk estimates are indicated by a numerical rating given in each of three hazard areas (Health/Flammability/Reactivity) ranging from a low of zero to a high of 4. The presence of a chronic hazard is indicated by a "YES". Consult HMIS training guides for Personal Protection letter codes, which indicate necessary protective equipment.

**PRIMARY ROUTE OF ENTRY:** The way one or more hazardous ingredients may enter the body and cause a generalized systemic or specific-organ toxic effect.

**ING:** Ingestion - A primary route of exposure through swallowing of material.

**INH:** Inhalation - A primary route of exposure through breathing of vapors.

**SKIN:** A primary route of exposure through contact with the skin.

#### SECTION IV: SPECIAL PROTECTION INFORMATION

Where respiratory protection is recommended, use only MSHA and NIOSH approved respirators and dust masks.

**MSHA:** Mine Safety and Health Administration

**NIOSH:** National Institute for Occupational Safety and Health.

#### SECTION V: PHYSICAL DATA

**EVAPORATION RATE:** Refers to the rate of change from the liquid state to the vapor state at ambient temperature and pressure in comparison to a given substance (e.g. water).

**pH:** A value representing the acidity or alkalinity of an aqueous solution (Highly Acidic pH = 1; Neutral pH = 7; Highly Alkaline pH = 14)

**VOC CONTENT:** The percentage or amount in pounds per gallon of the product that is regulated as a Volatile Organic Compound under the Clean Air Act of 1990 and various state jurisdictions.

**SOLUBILITY IN WATER:** A description of the ability of the product to dissolve in water.

#### SECTION VII: REACTIVITY DATA

**HAZARDOUS DECOMPOSITION:** Breakdown products expected to be produced upon product decomposition by extreme heat or fire.

**INCOMPATIBILITY:** Keep product away from listed substances or conditions to prevent hazardous reactions.

**POLYMERIZATION:** Indicates the tendency of the product's molecules to combine with themselves in a chemical reaction releasing excess pressure and heat.

**STABILITY:** Indicates the susceptibility of the product to decompose spontaneously and dangerously.

#### SECTION VIII: SPILL AND DISPOSAL PROCEDURES

**RCRA WASTE NOS:** RCRA (Resource Conservation and Recovery Act) waste codes (40 CFR 261) applicable to the disposal of spilled or unusable product from the original container.

#### SECTION X: TRANSPORTATION DATA

**CWA:** Clean Water Act - Federal law that regulates chemical releases to bodies of water.

**RQ:** Reportable Quantity - The amount of the specific ingredient that, when spilled to the ground and, can enter a storm sewer or natural watershed, must be reported to the National Response Center, and other regulatory agencies.

**TSCA:** Toxic Substances Control Act - A federal law requiring all commercial chemical substances to appear on an inventory maintained by the EPA.

#### DISCLAIMER

All statements, technical information, and recommendations contained herein are based on available scientific tests or data that we believe to be reliable. The accuracy and completeness of such data are not warranted or guaranteed. We cannot anticipate all conditions under which this information and our products, or the products of other manufacturers in combination with our products, may be used. Acuity Specialty Products Group assumes no liability or responsibility for loss or damage resulting from the improper use or handling of our products, from incompatible product combinations, or from the failure to follow instructions, warnings, and advisories in the product label and Material Safety Data Sheet

(rev 06/02)