

## **MATERIAL SAFETY DATA SHEET**

### ***1. Product and Company Identification***

**Product Name:** BW# 5 Brake Wash 45% VOC  
**Product Code:** BW#5 **Chemical Type:** Solvent Blend  
**Product Use:** Fast evaporating Low VOC brake wash. Use as received.

#### **WARNING! FLAMMABLE LIQUID AND VAPOR**

**Manufacturer:** Chemical Solvents Inc. **Revision Date:** 10/7/2008  
**Address:** 3751 Jennings Rd. **Emergency:** Chemtrec (800)424-9300  
Cleveland, Ohio 44109 **Phone:** (800) 362-0693

### ***2. Composition / Information on Ingredients***

<b>Component &amp; CAS Number</b>	<b>Volume %</b>	<b>OSHA hazard category:</b>
<b>Heptanes 426260-76-6</b>	40-45	Hazardous
<b>Acetone 67-64-1</b>	55-60	Hazardous

### ***3. Hazards Identification***

#### **WARNING! HIGH VAPOR CONCENTRATIONS MAY BE HARMFUL**

**CAUTION! May cause respiratory tract, skin and eye irritation**

**Odor/Appearance:** Clear liquid

#### **Potential health effects**

**Routes of exposure:** Skin, eyes, inhalation, ingestion.

#### **Eye Contact:**

Immediate effects of overexposure by eye contact may include eye irritation with tearing, pain or blurred vision. Irritation may show up as redness and/or swelling. May cause corneal damage.

#### **Skin Contact:**

May cause skin irritation. May cause allergic skin reaction. May be harmful if absorbed through skin. Symptoms of exposure may include: Crusting, scaling, weeping and itching of skin. Drying, cracking or inflammation of skin. Prolonged and /or repeated skin contact with methanol-soaked material has produced toxic effects including vision effects and death.

**Inhalation:**

Gross overexposure by inhalation to may cause suffocation if air is displaced by vapors and central nervous system stimulation with increased activity or sleeplessness, tremors or convulsions. These effects may be followed by central nervous system depression with dizziness, confusion, incoordination, drowsiness or unconsciousness. Gross overexposure may cause irregular heart beat with a strange sensation in the chest, "heart thumping" apprehension, lightheadedness, feeling of fainting, dizziness, weakness, sometimes progressing to loss of consciousness and death. Intentional misuse or deliberate inhalation may cause death without warning. Vapor reduces oxygen available for breathing and is heavier than air. Nasal discharge, hoarseness, coughing, chest pain and breathing difficulty. Adverse effects on vision.

**Ingestion:**

The major ingestion hazard is aspiration (liquid entering the lungs during ingestion or vomiting) which may result in "chemical pneumonia." Symptoms include coughing, gasping, choking, shortness of breath, bluish discoloration of the skin, rapid breathing and heart rate, and fever. Pulmonary edema or bleeding, drowsiness, confusion, coma and seizures may occur in more serious cases. Symptoms may develop immediately or as late as 24 hours after exposure, depending on how much chemical entered the lungs.

**Target Organ Effects:**

Overexposure (prolonged or repeated exposure) may cause:  
Kidney damage  
Central nervous system depression  
Liver damage  
Injury to the eyes  
Irritation of the respiratory tract  
Irritation of the digestive tract  
Drying of the skin  
Local irritation at the site of exposure  
Allergic reaction and local irritation of the skin

**Signs or Overexposure:**

Irritation of eyes, nose, throat, digestive tract. Diarrhea, vomiting, nausea and /or nervous system depression.

**Pre-existing Conditions Aggravated:**

**Significant exposure to this chemical may adversely affect people with acute or chronic disease of the:**

Respiratory Tract  
Skin  
Liver  
Kidneys  
Eyes  
Central nervous system  
Digestive tract

**Note to Physician:**

Catecholamines and similar adrenergic drugs are generally contraindicated because of potential for increased sensitivity of the heart from hydrocarbon exposure and subsequent ventricular fibrillation. Catecholamines such as adrenaline, and other compounds having similar effects, should be reserved for emergencies and then used only with special caution. Symptoms of poisoning may not appear for several hours.

## **4. First Aid Measures**

**Eye Contact:**

Flush with warm water for 15 minutes. Seek medical attention.

**Skin Contact:**

Wash with soap and water. Remove any contaminated clothing and launder before reusing. If irritation persists, seek medical attention.

**Inhalation:**

If inhaled, immediately remove to fresh air (protecting yourself). Keep person calm. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

**Ingestion:**

Material poses an aspiration hazard. If swallowed, do not induce vomiting. Immediately give 2 glasses of water. Never give anything by mouth to an unconscious person. Call a physician. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration.

**DO NOT GIVE AN UNCONCIOUS OR CONVULSING PERSON ANYTHING BY MOUTH!**

## **5. Fire Fighting Measures**

**Flash Point:** 1 F (TCC)

**Flammable limits in air, % by volume:**

**Upper:** No Information

**Lower:** No Information

**Extinguishing Media:**

Dry chemical, carbon dioxide, halon, or foam is recommended. Water spray may be used to cool containers or structures. Halon may decompose into toxic materials and carbon dioxide will displace oxygen, take proper precautions when using these materials.

**Unusual Fire & Explosion Hazards:**

This material may be ignited by heat, sparks, flames or other ignition sources. Vapors are heavier than air and will collect in low areas (sewers) or travel considerable distances. If containers are not cooled in a fire, they may rupture and ignite. Product will decompose and burn.

**Special Fire Fighting Procedures:**

Emergency responders should wear self-contained breathing apparatus. Wear other protective gear as conditions warrant. Keep unauthorized people out and try to contain spills or leaks if it can be done safely. Material will float on water, avoid spreading the fire.

## **6. Accidental Release Measures**

**Spill or Leak Instructions**

Contain spill with dikes of soil or nonflammable absorbent to minimize contaminated area. Avoid run-off into storm sewers and ditches leading to waterways. If required, notify state and local authorities. Place leaking containers in well-ventilated area. Clean up small spills by using a nonflammable absorbent or flushing sparingly with water. Contain larger spills with nonflammable diking or absorbent. Clean up by vacuuming or sweeping.

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind; keep out of low areas. Assess the spill situation, as the spill may not evolve large amounts of hazardous airborne contaminants in many outdoor spill situations. It may be advisable in some cases to simply monitor the situation until spilled product is removed.

## 7. Handling and Storage

### **Handling: FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN**

Use in accordance with good work place practices. Use with adequate ventilation. Keep containers closed when not in use. Always open containers slowly to allow any excess pressure to vent. Avoid breathing vapor. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. Decontaminate soiled clothing thoroughly before re-use. Destroy contaminated leather clothing.

Material should not be dispensed from its container by pouring, except for small sample containers where fume hoods or where other ventilation is used to manage the exposure limits. The use of a drum pump is recommended for dispensing from shipping containers. This product may generate a static charge. Ground/bond equipment when transferring material to prevent potential static accumulation. Electrical equipment and circuits in all storage and handling should conform to requirements of National Electric Code (Article 500 and 501) for a hazardous location. Empty containers may contain residues from the product. Treat empty containers with the same precautions as the material last contained. Do not cut, weld or apply heat to empty containers.

### **Storage:**

Store in a cool, dry area, away from heat or direct sunlight. Keep containers closed when not in use. Do not store with incompatible materials. Do not allow stored product to exceed 52 C(125 F) to prevent leakage or potential rupture of container from pressure and expansion. Protect from freezing temperatures.

## 8. Exposure Controls / Personal Protection

### **Protective Equipment:**

#### **Eyes:**

Do not wear contacts. Always use ANSI approved safety glasses or coverall chemical splash goggles.

#### **Protective Clothing:**

Where there is potential for skin contact have available and wear as appropriate impervious gloves, apron, pants, and jacket. Protective gloves and chemical splash goggles should be used when handling liquid

### **Engineering Controls:**

General or dilution ventilation is frequently insufficient as the sole means of controlling employee exposure. Local ventilation is usually preferred. Use a NIOSH approved respirator if ventilation is not adequate to maintain exposures below TLV levels.

### **Respiratory Protection:**

Based on workplace contaminant level and working limits of the respirator, use a respirator approved by NIOSH. The following is the minimum recommended equipment for an occupational exposure level.

For concentrations > 1 and < 10 times the occupational exposure level: Use air-purifying respirator with full facepiece and organic vapor cartridge(s) or air-purifying full facepiece respirator with an organic vapor canister or a full facepiece powered air-purifying respirator fitted with organic vapor cartridge(s). The air purifying element must have an end of service life indicator, or a documented change out schedule must be established. Otherwise, use supplied air.

For concentrations more than 10 times the occupational exposure level and less than the lower of either 100 times the occupational exposure level or the IDLH: Use Type C full facepiece supplied-air respirator operated in positive-pressure or continuous-flow mode.

For concentrations > 100 times the occupational exposure level or greater than the IDLH level or unknown concentrations (such as in emergencies): Use self-contained breathing apparatus with full facepiece in positive-pressure mode or Type C positive-pressure full facepiece supplied-air respirator with an auxiliary positive-pressure self-contained breathing apparatus escape system.

For escape: Use self-contained breathing apparatus with full facepiece or any respirator specifically approved for escape.

**Other Suggested Equipment:**

Eye wash station and emergency showers should be available. Spill containment equipment should be available.

**Discretion Advised:**

Chemical Solvents Inc. takes no responsibility for determining what measures are required for personal protection in any specific application. The general information should be used with discretion.

**Exposure guidelines:**

Component & CAS Number	Weight %	ACGIH TWA	ACGIH STEL	ACGIH CEILING	OSHA TWA	OSHA STEL	OSHA CEILING
ACETONE 67-64-1	55-60	500 PPM	750 PPM		750 PPM	1000 PPM	-
Heptanes 426260-76-6	40-45	400 PPM	500 PPM		500 PPM		

Component & CAS Number	Weight %	1990 NIOSH IDLH (Recognized by OSHA)	1994 NIOSH IDLH
ACETONE 67-64-1	55-60	20,000 ppm	2500 PPM
Heptanes 426260-76-6	40-45	750 PPM	

**9. Physical and Chemical Properties**

**Appearance:** Colorless liquid.  
**Odor:** Ester-like odor.  
**Vapor Pressure:** 216.2 mm Hg @ 25 deg C  
**Boiling Point (760 mmHg):** 56 C(133 F) to 58 C(136 F)  
**Solubility in Water @ 20 C:** Infinite  
**Specific Gravity:** 0.8 at 20 deg C

**10. Stability and Reactivity**

**Stability:** Stable.  
**Conditions to Avoid:** Avoid heat , flames, sparks, and other sources of ignition.  
**Incompatibility:** Keep away from peroxides and other polymerization initiators, oxidizing agents such as nitric acid, perchloric acid, chromium

trioxide, chlorosulfonic acid, silica gel, alumina, strong acids or amines.

**Hazardous combustion or decomposition products:**

Thermal decomposition products may include oxides of carbon.

**Hazardous Polymerization:**

Hazardous polymerization will not occur.

## 11. Toxicological Information

### Acetone

**Acute Exposure:**

**Oral LD50:** 7.4 g/kg (rats); practically nontoxic to animals.

**Inhalation:** LC50 (rat, 4 hr.) = 16000 ppm; practically nontoxic to animals.

**Skin:** Nonirritating to rabbit skin. Slightly toxic to animals by absorption. (LD50, rabbits 20 g/kg).

**Eye:** Severely irritant.

**Mutagenicity:** Not mutagenic in the Ames Test; induced abnormal *in vitro*- no evidence .

### HEPTANES

**Chronic Data:**

**Toluene (108-88-3) <4% of Heptane**

**Target Organs:** Epidemiology studies suggest that chronic occupational overexposure to toluene may damage color vision. Subchronic and chronic inhalation studies with toluene produced kidney and liver damage, hearing loss and central nervous system (brain) damage in laboratory animals. Intentional misuse by deliberate inhalation of high concentrations of toluene has been shown to cause liver, kidney, and central nervous system damage, including hearing loss and visual disturbances.

**Developmental:** Exposure to toluene during pregnancy has demonstrated limited evidence of developmental toxicity in laboratory animals. The effects seen include decreased fetal body weight and increased skeletal variations in both inhalation and oral studies.

**Acute Data:**

**Toluene (108-88-3)**

*Oral LD50*= 2.5 - 7.9 g/kg (Rat)

*Dermal LD50*= 14 g/kg (Rabbit)

*Inhalation LC50*= 8,000 ppm; 49 g/m<sup>3</sup> (4-hr., Rat)

**Heptane, Branched, Cyclic and Linear (426260-76-6)**

*Dermal LD50*= No information available

*Inhalation LC50*= 103 g/m<sup>3</sup> / 4 Hr. (Rat) (Based on Heptane)

*Oral LD50*= >5g/kg (Based on Naphtha)

**n-Heptane (142-82-5)**

*Dermal LD50*= No data available

*Inhalation LC50*= 18,295 ppm (2-hr., Mouse); 103 g/m<sup>3</sup> (4-hr., Rat)

*Oral LD50*= >15.0 g/kg (Mouse)

## 12. Ecological Information

**Aquatic toxicity ACETONE**

Non-toxic to aquatic life.

(Trout) 96 hours 5,540 mg/l

(Goldfish) 24 hours 5,000 mg/l

(Bluegill sunfish) 96 hours 8,300 mg/l

(Shrimp) 24 hours 2,100 mg/l

(Daphnia) 48 hours 10 mg/l

**Biodegradation**

Readily biodegradable.

### 13. Disposal Considerations

Dispose of spilled material in accordance with state and local regulations for waste that is non-hazardous by Federal definition. Note that this information applies to the material as manufactured; processing, use, or contamination may make this information inappropriate, inaccurate, or incomplete. Note that this handling and disposal information may also apply to empty containers, liners and rinsate. State or local regulations or restrictions are complex and may differ from federal regulations. This information is intended as an aid to proper handling and disposal; the final responsibility for handling and disposal is with the owner of the waste. See Section 9 - Physical and Chemical Properties.

### 14. Transport Information

#### US Department of Transportation

Shipping name:	FLAMMABLE LIQUIDS,N.O.S.
Hazard class:	3 (Flammable Liquid)
UN/NA Number:	UN 1993
Packing Group:	II
Emergency Response Guide:	128

### 15. Regulatory Information

#### Environmental Regulations

##### SARA 311:

Acute health:	Yes	
Chronic health:	No	
Fire:	Yes	
Sudden release of pressure:		No
Reactive:	No	

**SARA 313:** Title III of the 1986 Super fund Amendments and Reauthorization Act (SARA) and 40 CFR PART 372.

Ingredients	CAS #	Percent
Toluene	108-88-3	0-2%

All the chemicals used in this product are TSCA listed.  
Check with your local regulators to be sure all local regulations are met.

## 16. Other Information

**Hazard ratings** This information is intended solely for the use of individuals trained in the NFPA and/or HMIS systems.

**NFPA:** Health: 1 Flammability: 3 Reactivity: 0

**HMIS:** Health: 1 Flammability: 3 Reactivity: 0  
RATING: 4-EXTREME 3-HIGH 2-MODERATE 1-SLIGHT 0-INSIGNIFICANT

**MSDS Prepared by: Technical Director**

**Note:**

**For industrial use only.** The information contained herein is accurate to the best of our knowledge. We do not suggest or guarantee that any hazards listed herein are the only ones which exist. Chemical Solvents Inc makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances. Effects can be aggravated by other materials and/or this material may aggravate or add to the effects of other materials. This material may be released from gas, liquid, or solid materials made directly or indirectly from it. User has the sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. User must meet all applicable safety and health standards. Possession of an MSDS does not indicate that the possessor of the MSDS was a purchaser or user of the subject product.