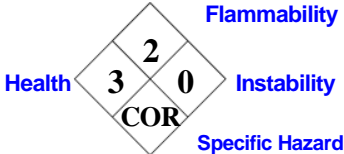




Baker Petrolite

# Material Safety Data Sheet

## Section 1. Chemical Product and Company Identification

<b>Product Name</b>	<b>BPB 59456</b>	<b>Code</b>	BPB59456
<b>Supplier</b>	Baker Petrolite A Baker Hughes Company 12645 W. Airport Blvd. (77478) P.O. Box 5050 Sugar Land, TX 77487-5050 For Product Information/MSDSs Call: 800-231-3606 (8:00 a.m. - 5:00 p.m. cst, Monday - Friday) 281-276-5400	<b>Version</b>	5.0
<b>Material Uses</b>	Condensate Treatment.	<b>Effective Date</b>	<b>12/20/2007</b>
<b>24 Hour Emergency Numbers</b>	CHEMTREC 800-424-9300 (U.S. 24 hour) Baker Petrolite 800-231-3606 (001)281-276-5400 CANUTEC 613-996-6666 (Canada 24 hours) CHEMTREC Int'l 01-703-527-3887 (International 24 hour)	<b>Print Date</b>	12/21/2007
<b>National Fire Protection Association (U.S.A.)</b>			

## Section 2. Hazards Identification

<b>Physical State and Appearance</b>	State: Clear. Liquid., Color: Colorless., Odor: Amine like.
<b>CERCLA Reportable Quantity</b>	Not applicable.
<b>Hazard Summary</b>	DANGER. May cause chronic effects. Combustible liquid. At elevated temperatures, vapors can form an ignitable or explosive mixture with air. Can form explosive mixtures at temperatures at or above the flash point. Vapors can flow along surfaces to distant ignition sources and flash back. Static discharges can cause ignition or explosion when container is not bonded. May be corrosive to eyes, skin and respiratory tract. May be toxic by skin absorption. May be toxic if inhaled.
<b>Routes of Exposure</b>	Skin (Permeator), Skin (Contact), Eyes, Inhalation.
<b>Potential acute health effects</b>	<p><i>Eyes</i> May be corrosive to the eyes. May cause eye burns and permanent eye injury.</p> <p><i>Skin</i> May be corrosive. Skin contact may produce burns. May be toxic if absorbed through the skin.</p> <p><i>Inhalation</i> May be toxic if inhaled. May be severely irritating to the lungs.</p> <p><i>Ingestion</i> Not considered a likely route of exposure, however, may be corrosive if swallowed.</p>
<b>Medical Conditions aggravated by Exposure</b>	Exposure to this product may aggravate medical conditions involving the following: kidneys, nervous system, liver, respiratory tract, skin/epithelium, eyes.
<b>See Toxicological Information (section 11)</b>	
<b>Additional Hazard Identification Remarks</b>	Not available.

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**Section 3. Composition/Information on Ingredients**

Name	CAS #	% by Weight
Cyclohexylamine	108-91-8	30 - 60
Morpholine	110-91-8	10 - 30

See Section 8 for information on permissible exposure limits and threshold limit values.

**Section 4. First Aid Measures**

<b>Eye Contact</b>	Immediately flush the eye(s) continuously with lukewarm, gently flowing water for at least 20-60 minutes while holding the eyelid(s) open. Get medical attention immediately.
<b>Skin Contact</b>	Remove contaminated clothing and shoes immediately. Wash affected area with soap and mild detergent and large amounts of lukewarm, gently flowing water until no evidence of chemical remains (for at least 20-60 minutes). Get medical attention if irritation occurs.
<b>Inhalation</b>	Remove to fresh air. Oxygen may be administered if breathing is difficult. If not breathing, administer artificial respiration and seek medical attention. Get medical attention if symptoms appear.
<b>Ingestion</b>	Get medical attention immediately. If swallowed, do not induce vomiting unless directed to do so by medical personnel. Wash out mouth with water if person is conscious. Never induce vomiting or give anything by mouth to a victim who is unconscious or having convulsions.
<b>Notes to Physician</b>	Not available.
<b>Additional First Aid Remarks</b>	If product is ingested and vomiting occurs naturally, have person lean forward to reduce the risk of aspiration into the lungs.

**Section 5. Fire Fighting Measures**

<b>Flammability of the Product</b>	Combustible liquid. At elevated temperatures, vapors can form an ignitable or explosive mixture with air. Can form explosive mixtures at temperatures at or above the flash point. Vapors can flow along surfaces to distant ignition sources and flash back. Static discharges can cause ignition or explosion when container is not bonded.
<b>OSHA Flammability Class</b>	II
<b>Products of Combustion</b>	These products are carbon oxides (CO, CO <sub>2</sub> ) nitrogen oxides (NO, NO <sub>2</sub> ...).
<b>Fire Hazards in Presence of Various Substances</b>	Open Flames/Sparks/Static. Heat.
<b>Fire Fighting Media and Instructions</b>	In case of fire, use foam, dry chemicals, or CO <sub>2</sub> fire extinguishers. Evacuate area and fight fire from a safe distance. Water spray may be used to keep fire-exposed containers cool. Keep water run off out of sewers and public waterways. Note that flammable vapors may form an ignitable mixture with air. Vapors may travel considerable distances and flash back if ignited.
<b>Protective Clothing (Fire)</b>	Do not enter fire area without proper personal protective equipment, including NIOSH approved self-contained breathing apparatus.
<b>Special Remarks on Fire Hazards</b>	Not available.

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**Section 6. Accidental Release Measures**

**Spill** Put on appropriate personal protective equipment. Keep personnel removed and upwind of spill. Shut off all ignition sources; no flares, smoking, or flames in hazard area. Approach release from upwind. Shut off leak if it can be done safely. Contain spilled material. Keep out of waterways. Dike large spills and use a non-sparking or explosion-proof means to transfer material to an appropriate container for disposal. For small spills add absorbent (soil may be used in the absence of other suitable materials) scoop up material and place in a sealed, liquid-proof container. Note that flammable vapors may form an ignitable mixture with air. Vapors may travel considerable distances from spill and flash back, if ignited. Waste must be disposed of in accordance with federal, state and local environmental control regulations.

**Other Statements** Not applicable.

**Additional Accidental Release Measures Remarks** Not available.

**Section 7. Handling and Storage**

**Handling and Storage** Put on appropriate personal protective equipment. Avoid contact with eyes, skin, and clothing. Avoid breathing vapors or spray mists. Use only with adequate ventilation. Store in a dry, cool and well ventilated area. Keep away from heat, sparks and flame. Keep away from incompatibles. Keep container tightly closed and dry. To avoid fire or explosion, ground container equipment and personnel before handling product.

**Additional Handling and Storage Remarks** Not available.

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

<b>Exposure Limits</b>	Cyclohexylamine	<b>ACGIH (United States).</b> TWA: 41 mg/m <sup>3</sup> TWA: 10 ppm <b>OSHA PEL 1989 (United States).</b> TWA: 10 ppm 8 hour/hours. TWA: 40 mg/m <sup>3</sup> 8 hour/hours.
	Morpholine	<b>ACGIH (United States). Skin</b> TWA: 71 mg/m <sup>3</sup> TWA: 20 ppm <b>OSHA PEL 1989 (United States). Skin</b> TWA: 70 mg/m <sup>3</sup> 8 hour/hours. STEL: 105 mg/m <sup>3</sup> 15 minute(s). TWA: 20 ppm 8 hour/hours. STEL: 30 ppm 15 minute(s).

**Additional Information on Exposure Limits** The OSHA permissible exposure levels shown above are the OSHA 1989 levels or from subsequent OSHA regulatory actions. Although the 1989 levels have been vacated the 11th Circuit Court of Appeals, Baker Petrolite Corporation recommends that these lower exposure levels be observed as reasonable worker protection.

**Engineering Controls** Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors or particles below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

**Personal Protection**

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Personal Protective Equipment recommendations are based on anticipated known manufacturing and use conditions. These conditions are expected to result in only incidental exposure. A thorough review of the job tasks and conditions by a safety professional is recommended, however, to determine the level of personal protective equipment appropriate for these job tasks and conditions.

**Eyes** Chemical safety goggles. Use full face shield if splashes could occur.

**Body** Wear long sleeves and chemical resistant apron to prevent repeated or prolonged skin contact.

**Respiratory** Respirator use is not expected to be necessary under normal conditions of use. In poorly ventilated areas, emergency situations or if exposure levels are exceeded, use NIOSH approved full face respirator.

**Hands** Chemical resistant gloves. Butyl rubber gloves. Nitrile gloves.

**Feet** Chemical resistant boots or overshoes.

**Other information** Not available.

**Additional Exposure** Not available.

**Control Remarks**

### Section 9. Physical and Chemical Properties

<b>Physical State and Appearance</b>	Clear. Liquid.	<b>Odor</b>	Amine like.
<b>pH</b>	12 - 12.5 (Neat - without dilution.)	<b>Color</b>	Colorless.
<b>Specific gravity</b>	0.954 - 0.966 @ 16°C (60°F)		
<b>Density</b>	7.95 - 8.05 lbs/gal @ 16°C (60°F)		
<b>Flash Points</b>	Closed cup: 54.4°C (130°F). (TCC)		
<b>Flammable Limits</b>	L.E.L. Not available. U.E.L. Not available.		
<b>Autoignition Temperature</b>	Not available.		
<b>Initial Boiling Point</b>	Not available.		
<b>Boiling Point</b>	Not available.		
<b>Vapor Density</b>	>1 (Air = 1)		
<b>Vapor Pressure</b>	Not Available or Not Applicable for Solids.		
<b>Evaporation Rate</b>	Not Available or Not Applicable for Solids.		
<b>VOC</b>	Not available.		
<b>Viscosity</b>	10 - 11 cP		
<b>Pour Point</b>	Not available.		
<b>Solubility (Water)</b>	Soluble		
<b>Physical Chemical Comments</b>	Not available.		

### Section 10. Stability and Reactivity

<b>Stability and Reactivity</b>	The product is stable.
<b>Conditions of Instability</b>	Not available.
<b>Incompatibility with Various Substances</b>	Oxidizing material.

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**Hazardous Decomposition Products**

Not applicable.

**Hazardous Polymerization**

Hazardous polymerization is not expected to occur.

**Special Stability & Reactivity Remarks**

Not available.

**Section 11. Toxicological information****Component Toxicological Information****Acute Animal Toxicity**

Cyclohexylamine

ORAL (LD50): Acute: 224 mg/kg [Mouse]. 156 mg/kg [Rat]. 710 mg/kg [Rat]. DERMAL (LD50): Acute: 277 mg/kg [Rabbit]. 260 mg/kg [Rabbit]. VAPOR (LC50): Acute: 7500 mg/m<sup>3</sup> 4 hour/hours [Rat]. 1070 mg/m<sup>3</sup> 4 hour/hours [Mouse]. 2.3 mg/l 4 hour/hours [Rat].

Morpholine

ORAL (LD50): Acute: 1450 mg/kg [Rat]. 525 mg/kg [Mouse]. VAPOR (LC50): Acute: 8000 ppm 8 hour/hours [Rat].

**Chronic Toxicity Data**

## 1) Cyclohexylamine

Cyclohexylamine is a component of this product. Cyclohexylamine may cause a skin allergy. Repeated or high exposure may damage vision and possibly the kidneys and liver.

Cyclohexylamine has produced embryotoxicity, low birth count, postnatal mortality, and decreased body weight in laboratory animals at high doses. Cyclohexylamine is embryotoxic. No effects have been seen in humans. Additional effects in exposed experimental animals have been methemoglobinemia (a decrease in the oxygen carrying ability of the blood), seizures with fatal exposure, degenerative changes in the brain, liver, and kidney following fatal doses, and pre-mortem shock, hyperactivity, anemia, elevated metabolic rates, and temperature.

## 2) Morpholine

Morpholine is a component of this product. Morpholine is very toxic with a probable lethal oral dose of between one teaspoon and one ounce for the average person (HSDB).

In animal studies, it has caused kidney and liver damage (Migukina, 1973). Morpholine is not known at this time to be a human carcinogen: animal test have produced mixed results (Reprotex). Morpholine does react with sodium nitrite and nitrogen dioxide to form N-nitrosomorpholine which has produce cancer in animal studies (Challis & Kyrtopoulos, 1977).

Results of animal testing for its genetic effects have been mixed (Reprotex). Again, it can react with sodium nitrite to produce N-nitrosomorpholine which is a mutagenic chemical (Brau, 1977).

**Product Toxicological Information****Acute Animal Toxicity** Not available.**Target Organs** kidneys, nervous system, liver, respiratory tract, skin/epithelium, eyes.**Other Adverse Effects** Not available.

**Section 12. Ecological Information**



<b>Ecotoxicity</b>	BPB 59456	Fathead minnow (LC50)	96 hour/hours	34.7 mg/l
		Ceriodaphnia dubia (LC50)	48 hour/hours	68.7 mg/l
		Daphnia magna (LC50)	48 hour/hours	106 mg/l
<b>BOD5 and COD</b>	Not available.			
<b>Biodegradable/OECD</b>	Not available.			
<b>Toxicity of the Products of Biodegradation</b>	Not available.			
<b>Special Remarks</b>	Not available.			

**Section 13. Disposal Considerations**

Responsibility for proper waste disposal rests with the generator of the waste. Dispose of any waste material in accordance with all applicable federal, state and local regulations. Note that these regulations may also apply to empty containers, liners and rinsate. Processing, use, dilution or contamination of this product may cause its physical and chemical properties to change.

**Additional Waste Remarks** Not available.

**Section 14. Transport Information**

<b>DOT Classification</b>	CORROSIVE LIQUID, FLAMMABLE, N.O.S. (Contains: Cyclohexylamine, Morpholine), 8(3), UN2920, II		
<b>DOT Reportable Quantity</b>	Not applicable.		
<b>Marine Pollutant</b>	Not applicable.		
<b>Additional DOT Information</b>	Not available.		
<b>Emergency Response Guide Number</b>	132		

**Section 15. Regulatory Information**

<b>HCS Classification</b>	Target organ effects. Combustible liquid. Corrosive. Sensitizer.
<b>U.S. Federal Regulations</b>	
<b>Environmental Regulations</b>	Extremely Hazardous Substances: Cyclohexylamine; SARA 313 Toxic Chemical Notification and Release Reporting: Not applicable to any components in this product. SARA 302/304 Emergency Planning and Notification substances: Cyclohexylamine; Hazardous Substances (CERCLA 302): Not applicable to any components in this product. SARA 311/312 MSDS distribution - chemical inventory - hazard identification: fire; immediate health hazard; delayed health hazard;

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<b>Threshold Planning Quantity (TPQ)</b> <b>TSCA Inventory Status</b>	<p>Clean Water Act (CWA) 307 Priority Pollutants: Not applicable to any components in this product.          Clean Water Act (CWA) 311 Hazardous Substances: Not applicable to any components in this product.          Clean Air Act (CAA) 112(r) Accidental Release Prevention Substances: Cyclohexylamine;          Cyclohexylamine 2104 gal.</p> <hr/> <p>All components are included or are exempted from listing on the US Toxic Substances Control Act Inventory.</p> <p>This product does not contain any components that are subject to the reporting requirements of TSCA Section 12(b) if exported from the United States.</p>
<b>State Regulations</b>	State specific information is available upon request from Baker Petrolite.
<b>International Regulations</b>	<p><b>Canada</b> All components are compliant with or are exempted from listing on the Canadian Domestic Substance List.</p> <hr/> <p><b>WHMIS (Canada)</b> B-3, D-1B, D-2B, E</p> <hr/> <p><b>European Union</b> All components are included or are exempted from listing on the European Inventory of Existing Commercial Chemical Substances or the European List of Notified Chemical Substances.</p> <p>International inventory status information is available upon request from Baker Petrolite for the following countries: Australia, China, Korea (TCCL), Philippines (RA6969), or Japan.</p>
<b>Other Regulatory Information</b>	No further regulatory information is available.

### Section 16. Other Information

<b>Other Special Considerations</b>	<p>File 2618</p> <p>06/12/03 - Changes to Sections 1, 2, 3, 5, 8, 9, 11 and 15</p> <p>08/27/04 - Changes to Sections 3, 8 and 15.</p> <p>04/13/05 - Changes to Sections 2, 3, 5, 8, 9 and 15.</p> <p>12/20/07 - Change to Section 12</p>
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**In April, 2005, a number of format changes were made. The most notable of these were switching Sections 2 and 3, moving the exposure limits to Section 8, and moving the flash point from Section 5 to Section 9.**

#### Baker Petrolite Disclaimer

*NOTE: The information on this MSDS is based on data which is considered to be accurate. Baker Petrolite, however, makes no guarantees or warranty, either expressed or implied of the accuracy or completeness of this information.*

*The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product.*

*This MSDS was prepared and is to be used for this product. If the product is used as a component in another product, this MSDS information may not be applicable.*