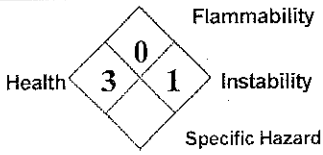
BAKER HUGHES
Baker Petrolite

Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

Product Name	**BPB 59370 OXYGEN SCAVENGER**	**Code**	BPB59370
Supplier	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	**Version**	4.0
Material Uses	Oxygen scavenger.	**Effective Date**	**10/3/2007**
24 Hour Emergency Numbers	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)	**Print Date**	10/3/2007

National Fire Protection Association (U.S.A.)



Section 2. Hazards Identification

Physical State and Appearance	State: Clear. Liquid., Color: Yellow., Odor: Strong Pungent. Sulfur dioxide.
CERCLA Reportable Quantity	Sodium bisulfite, 1316 gal. of this product.
Hazard Summary	DANGER. May cause chronic effects. May be irritating to eyes, skin and respiratory tract. May cause skin sensitization (allergic reaction).
Routes of Exposure	Skin (Contact), Eyes, Inhalation.
Potential acute health effects	
Eyes	May be severely irritating to the eyes. Prolonged contact may cause burns.
Skin	May be irritating to skin. Skin sensitizer. May cause allergic skin reactions with repeated exposure.
Inhalation	May be irritating to lungs.
Ingestion	Not considered a likely route of exposure, however, may be harmful or cause irritation if swallowed.
Medical Conditions aggravated by Exposure	Exposure to this product may aggravate medical conditions involving the following: cardiovascular system, respiratory tract, skin/epithelium, eyes.
See Toxicological Information (section 11)	
Additional Hazard Identification Remarks	Repeated or prolonged contact may cause dermatitis (inflammation) and defatting of the skin (dryness). Ingestion of sodium bisulfite can cause allergic reactions in sensitized individuals. Ingestion of large amounts can cause abdominal pain, diarrhea, central nervous system depression, irritability, restlessness, clonic seizures, apnea, cyanosis, and death due to respiratory or cardiovascular collapse (HSDB).

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Section 3. Composition/Information on Ingredients

Name	CAS #	% by Weight
Sodium bisulfite	7631-90-5	30 - 60
Sodium sulfite	7757-83-7	0.1 - 1

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

Section 4. First Aid Measures

Eye Contact	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.
Skin Contact	Remove and launder or clean contaminated clothing and shoes. Wash with soap and water for at least 15 minutes or until no evidence of material remains. Get medical attention if irritation occurs.
Inhalation	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.
Ingestion	If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never induce vomiting or give anything by mouth to a victim who is unconscious or having convulsions. Get medical attention if symptoms appear.
Notes to Physician	Not available.
Additional First Aid Remarks	Not available.

Section 5. Fire Fighting Measures

Flammability of the Product	Not regulated as flammable or combustible.
OSHA Flammability Class	IIIB
Products of Combustion	These products are sulfur oxides (SO_2, SO_3 etc.) Oxides of sodium..
Fire Hazards in Presence of Various Substances	Heat.
Fire Fighting Media and Instructions	In case of fire, use foam, dry chemicals, or CO2 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.
Protective Clothing (Fire)	Do not enter fire area without proper personal protective equipment, including NIOSH approved self-contained breathing apparatus.
Special Remarks on Fire Hazards	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 absence of other suitable materials scoop up material and place in a sealed, liquid-proof container. Waste must be disposed of in accordance with federal, state and local environmental control regulations.
Other Statements	If RQ (Reportable Quantity) is exceeded, report to National Spill Response Office at 1-800-424-8802.
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. Protect from ignition. Store in a dry, cool and well ventilated area. Keep away from incompatibles. Keep container tightly closed and dry.
Additional Handling and Storage Remarks	Not available.

Section 8. Exposure Controls/Personal Protection

Exposure Limits	Sodium bisulfite	**ACGIH (United States).** TWA: 5 mg/m^3 8 hour/hours. **OSHA PEL 1989 (United States).** TWA: 5 mg/m^3 8 hour/hours.
	Sodium sulfite	Not available.
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

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.

Body Wear long sleeves 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. Nitrile or Neoprene gloves.

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Feet	Chemical resistant boots or overshoes.
Other information	Not available.
Additional Exposure Control Remarks	Not available.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Clear. Liquid.	**Odor**	Strong Pungent. Sulfur dioxide.
pH	4.1 - 4.3 (Neat - without dilution.)	**Color**	Yellow.
Specific gravity	1.279 - 1.291 @ 16°C (60°F)		
Density	10.65 - 10.75 lbs/gal @ 16°C (60°F)		
Flash Points	Not applicable.		
Flammable Limits	L.E.L. Not available. U.E.L. Not available.		
Autoignition Temperature	Not available.		
Initial Boiling Point	Not available.		
Boiling Point	103°C (217°F)		
Vapor Density	>1 (Air = 1)		
Vapor Pressure	32 - mm Hg		
Evaporation Rate	Not Available or Not Applicable for Solids.		
VOC	Not available.		
Viscosity	24 - 26 cP @ 20°C (68°F)		
Pour Point	-3.9°C (25°F) Freezing Point		
Solubility (Water)	Soluble		
Physical Chemical Comments	Not available.		

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Conditions of Instability	Not available.
Incompatibility with Various Substances	Oxidizing material. Metal. Acid.
Hazardous Decomposition Products	Not applicable.
Hazardous Polymerization	Hazardous polymerization is not expected to occur.
Special Stability & Reactivity Remarks	Avoid strong mineral acids which will yield sulfur dioxide gas. Keep away from heat.

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Section 11. Toxicological information

Component Toxicological Information

Acute Animal Toxicity

Sodium bisulfite	ORAL (LD50): Acute: 2000 mg/kg [Rat].
Sodium sulfite	ORAL (LD50): Acute: 820 mg/kg [Mouse]. 3560 mg/kg [Rat].

Chronic Toxicity Data

1) Sodium bisulfite

Sodium bisulfite is a component of this product. Sodium bisulfite can promote the growth of tumors (Erlich ascites carcinoma) in mice (Dinerman & Ignatev, 1966), but the implications of this finding for human exposure is unclear.

Sodium bisulfite has been mutagenic in many short-term test systems, including the Ames Salmonella microsome assay (Pagano & Zeiger, 1985; De Giovanni-Donnelly, 1985), M. aureus (Clark, 1953), and E. coli (Mukai et al, 1970). Sodium bisulfite was reported to induce sister chromatid exchanges in hamster cells in vitro (MacRae & Stich, 1979), and transformed hamster cells into cancer cells in vitro (DiPaolo et al, 1981). Dose-related increases in sister chromatid exchanges and micronuclei were found in human blood lymphocytes exposed to sodium bisulfite in vitro (Meng & Zhang, 1992). Sodium bisulfite is a direct-acting DNA mutagen. Sodium bisulfite deaminates the cytosine residues (Shapiro et al, 1974) and has been used for site-specific mutagenesis of purified genes (Shortle & Botstein, 1983).

2) Sodium sulfite

Sodium sulfite is a component of this product. There are mixed results for mutagencity tests on sodium sulfite. Sodium sulfite has been genotoxic in many short-term test systems, including inducing chromosome aberrations in mouse cells and sperm abnormalities in mice. Sodium sulfite has been mutagenic in yeast and Micrococcus aureus, but not mutagenic in the Ames Salmonella/microsome assay. Sodium sulfite induced chromosome aberrations in Vicia root cells, but did not induce dominant lethal or sex-linked recessive lethal mutations in Drosphilia. Sodium sulfite did not induce chromosome aberrations, sister chromatid exchanges, or micronuclei in hamsters or mice.

Product Toxicological Information

Acute Animal Toxicity	Not available.
Target Organs	cardiovascular system, respiratory tract, skin/epithelium, eyes.
Other Adverse Effects	Not available.

Section 12. Ecological Information

Ecotoxicity	BPB 59370 OXYGEN SCAVENGER	Fathead minnow (LC50)	96 hour/hours	>1000 ppm
		Ceriodaphnia dubia (LC50)	48 hour/hours	686 ppm
BOD5 and COD	Not available.			
Biodegradable/OECD	Not available.			
Toxicity of the Products of Biodegradation	Not available.			
Special Remarks	An EcoTox™ Report, and/or the material's environmental fate is available upon request at the following number: 1-800-235-4249, then press 4.			

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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

DOT Classification	BISULFITES, AQUEOUS SOLUTION, N.O.S. (Contains: Sodium bisulfite), 8, UN2693, III	
DOT Reportable Quantity	Sodium bisulfite, 1316 gal. of this product.	
Marine Pollutant	Not applicable.	
Additional DOT Information	Not available.	
Emergency Response Guide Number	154	

Section 15. Regulatory Information

HCS Classification	Target organ effects. Irritant. Sensitizer.
U.S. Federal Regulations	
Environmental Regulations	Extremely Hazardous Substances: Not applicable to any components in this product. SARA 313 Toxic Chemical Notification and Release Reporting: Not applicable to any components in this product. SARA 302/304 Emergency Planning and Notification substances: Not applicable to any components in this product. Hazardous Substances (CERCLA 302): Sodium bisulfite, 1316 gal. of this product.; SARA 311/312 MSDS distribution - chemical inventory - hazard identification: immediate health hazard; delayed health hazard; Clean Water Act (CWA) 307 Priority Pollutants: Not applicable to any components in this product. Clean Water Act (CWA) 311 Hazardous Substances: Sodium bisulfite; Clean Air Act (CAA) 112(r) Accidental Release Prevention Substances: Not applicable to any components in this product.
Threshold Planning Quantity (TPQ)	Not applicable.
TSCA Inventory Status	All components are included or are exempted from listing on the US Toxic Substances Control Act Inventory. 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.
State Regulations	State specific information is available upon request from Baker Petrolite.

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International Regulations	
Canada	All components are compliant with or are exempted from listing on the Canadian Domestic Substance List.
WHMIS (Canada)	E
European Union	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.
	International inventory status information is available upon request from Baker Petrolite for the following countries: Australia, China, Korea (TCCL), Philippines (RA6969), or Japan.
Other Regulatory Information	No further regulatory information is available.

Section 16. Other Information

Other Special Considerations	File 2608 08/13/02 - Changes to Sections 1, 2, 3, 8, 9, and 14 08/08/05 - Changes to Sections 1, 2, 3, 4, 5, 8, 9, 10, 12, and 15 02/22/06 - Change to Section 15 (US). 10/03/07 - Change to Section 9

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.