



Material Safety Data Sheet

Natural Caffeine USP

	<table border="1"> <tr> <td>Health Hazard</td> <td style="text-align: center;">2</td> </tr> <tr> <td>Fire Hazard</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Reactivity</td> <td style="text-align: center;">0</td> </tr> <tr> <td>Personal Protection</td> <td style="text-align: center;">E</td> </tr> </table>	Health Hazard	2	Fire Hazard	1	Reactivity	0	Personal Protection	E	
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NFPA	HMIS	Personal Protective Equipment								

Section 1.0 Product Identification and Company Information

Common Name or Trade Name	Natural Caffeine USP 32 (Anhydrous)	Catalog Number(s)	QPP-001-01/02/03/04/05
Manufacturer	QUSAC PHARMA INC. 645 boul des Erables Valleyfield Quebec J6T 6G3 Canada	CAS#	58-08-2
Common Name	Natural Caffeine	RTECS	EV6475000
Synonyms	1,3,7-trimethylxanthine	TSCA	TSCA 8(b) inventory: Caffeine
IUPAC	1,3,7-trimethylpurine-2,6-dione		
Chemical Formula	C ₈ H ₁₀ N ₄ O ₂		
Emergency 24hrs	Canutec 613-996-6666		
Information Business hours	QUSAC Pharma Inc. 450-371-2925		

Section 2.0 Composition and Information on Ingredients

Name	CAS#	LD50	% by Weight
Natural Caffeine	58-08-2	192 mg/Kg	100

Section 3.0 Hazards Identification

Emergency Overview


WARNING! HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. POSSIBLE BIRTH DEFECT HAZARD. MAY CAUSE DEFECTS BASED ON ANIMAL DATA.


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Potential Health Effects

Inhalation	Inhalation of dust may irritate the mucous membranes and respiratory tract. High concentrations may produce effects paralleling ingestion.
Ingestion	Toxic. The adult mean lethal dose is approximately 10 g. Large doses may produce palpitation, excitement, insomnia, dizziness, headache and vomiting
Skin Contact	Causes irritation to skin, Symptoms include redness, itching and pain
Eye Contact	Causes irritation, redness and pain
Chronic Exposure	Excessive use of caffeine may lead to digestive disturbances, constipation, palpitations, shortness of breath and depressed mental states. Possible teratogen. May cause congenital malformation in the fetus
Section 4.0 First Aid Measures	
Inhalation	Remove to fresh air, If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention
Ingestion	Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention
Skin Contact	Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
Eye Contact	Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately
Section 5.0 Fire Fighting Measures	
Fire	As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source.
Explosion	Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Fire Extinguishing Media	Water spray, dry chemical, alcohol foam, or carbon dioxide
Special Information	In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.
Section 6.0 Accidental Release Measures	
Remove all sources of ignition. Ventilate area of spill. Wear appropriate personal protective equipment as specified in Section 8. Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal.	
Section 7.0 Handling and Storage	
Keep in tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Fiber drum containers must be kept dry and away from excessive moisture. Empty containers of this material may be hazardous when empty since they retain product residues (Dust, Solids); observe all warnings and precautions listed for the product.	
Section 8.0 Exposure Controls/Personal Protection	
Airborne Exposure Limits	None established

Ventilation System	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.		
Personal Respirators	NIOSH Approved, for conditions of use where exposure to the dust or mist is apparent, a half-face dust/mist respirator may be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator.		
Skin Protection	Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.		
Eye Protection	Use chemical safety goggles and/or full face shield where dusting or splashing is possible.		
Section 9.0 Physical and Chemical Properties			
Appearance	Crystalline powder	Taste	Bitter. (Slight.)
Molecular Weight	194.2 g/mole	Color	White
pH (1% soln/water)	6.9	Solubility	1 gm in 46 ml water
Melting Point	237°C to 239°C	Boiling Point	178°C (sublimes)
Specific Gravity	1.23	Odor	Odorless
Section 10.0 Stability and Reactivity Data			
Stability	The product is stable under normal conditions of use.		
Conditions of Instability	Excess heat		
Hazardous Decomposition	Burning may produce carbon monoxide, carbon dioxide, nitrogen oxides		
Hazardous Polymerization	Will not occur		
Incompatibilities	Incompatible with strong oxidizers, iodine silver salts, tannins, and strong solutions of caustic alkalis		
Section 11.0 Toxicological Information			
Chronic Effects on Humans	<p>Carcinogenic effects: 3 (Not classifiable for human.) by IARC.</p> <p>Mutagenic effects: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. May cause damage to the following organs: heart, gastrointestinal tract, central nervous system (CNS).</p> <p>May cause cancer (tumorigen) based on animal studies. May cause reproductive and fetal effects. May cause digestive tract disturbances (increased gastric acid, and pepsin secretion and a decrease in lower esophageal sphincter pressure), cardiovascular disturbances. Since it is a CNS stimulant, it may also affect the Central Nervous System (CNS).</p>		
Special Remarks on Toxicity	LD50 - Route: Oral; Dose: 192 mg/kg		

<p>Special Remarks on other Toxic Effects on Humans and Acute Potential Health Effects</p>	<p>May cause gastrointestinal (digestive) tract irritation with epigastric pain, abdominal cramps, nausea, vomiting and diarrhea. Affects metabolism and cardiovascular system including increase in metabolism, flushing, palpitations, rapid heart rate, dysrhythmias, hypotension, blood pressure elevation and weight loss, metabolic acidosis. May affect brain and behavior/central nervous system. Symptoms may include nervousness, anxiety, restlessness, insomnia, dizziness, tremor, seizures, convulsions, hallucinations, somnolence, toxic psychosis, tremors, convulsions, ataxia. May also affect blood, respiration (hyperventilation) and urinary system (mild increase in urinary volume and urinary sodium excretion), and may directly produce hypokalemia.</p>
<p>Section 12.0 Ecological Information</p>	
<p>Products of Biodegradation</p>	<p>Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.</p>
<p>Toxicity of the Products of Biodegradation</p>	<p>Products of degradation are less toxic than the product itself.</p>
<p>Section 13.0 Disposal Considerations</p>	
<p>Waste must be disposed of in accordance with federal, state and local environmental Control regulations.</p>	
<p>Section 14.0 Transport Information</p>	
<p>TDG Act Canada Classification</p>	<p>Class 6.1 Toxic substances</p>
<p>DOT Classification</p>	<p>Class 6.1 Toxic substances</p>
<p>Identification (Shipping name)</p>	<p>Alkaloid, solid, n.o.s.</p>
<p>Identification (Technical name)</p>	<p>(caffeine)</p>
<p>TDG Special Provisions for Transport</p>	<p>Special Provision 16 regarding the use of Technical name and Shipping names.</p>
<p>TDG and DOT (Pictogram) ADR (Europe) (Pictograms)</p>	
<p>Section 15.0 Transport Information</p>	
<p>Other Regulations</p>	<p>OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.</p>
<p>WHMIS (Canada)</p>	<p>Not controlled under WHMIS (Canada). Does not have a WHMIS classification</p>
<p>DSCL (EEC)</p>	<p>R22- Harmful if swallowed. R40- Possible risks of irreversible effects. R63- Possible risk of harm to the fetus. S2- Keep out of the reach of children.</p>

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<p>DSCL (Europe) (Pictograms)</p>											
<p>Section 16.0 Other Information</p>											
<p>Validated by Q.C.</p>	<p>Dr. Khaled Abou-Zeid</p>	<p>Date</p>	<p>May 25, 2011</p>								
<p>Verified by Q.A.</p>	<p>Peter K Booth</p>	<p>Date</p>	<p>May 29, 2011</p>								
<p>Date last revision</p>	<p>June 01 2011</p>	<p>Expires</p>	<p>June 01 2014</p>								
<p><i>All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS.</i></p> <p><i>It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, QUSAC Pharma Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.</i></p>											