

BBC Biochemical MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Information

Common Name: OG-6	Code: 4750, 4760, 4770
Supplier: BBC Biochemical	MSDS#: 4700
Synonym: Orange G Solution (Alcoholic)	Validation Date: 3-6-09
Trade Name: Not Available	Print Date: 3-6-09
Material Uses: Not Available	Responsible Name: Dr. B
Manufacturer: BBC Biochemical PO Box 1320 409 Eleanor Lane Mount Vernon, WA 98273 1-800-635-4477	In Case of Emergency: 1-800-424-9300 Chemtrec USA 1-202-483-7616 Chemtrec Intrl 1-800-635-4477

Section 2. Composition and Information on Ingredients

Name	CAS#	% by Weight	Exposure Limits
1) Orange G	1936-15-8	N/A	Not Available
2) Ethyl Alcohol, 95%	64-17-5	N/A	TWA: 1900 (ppm) from OSHA (PEL) TWA: 1000 (ppm) from ACGIH (TLV) TWA: 1900 (mg/m ³) TWA: 1000 (mg/m ³)
3) Phosphotungstic Acid	12067-99-1	N/A	TWA: 1 CIEL: 3 (mg/m ³)
4) Methanol			

Section 3. Hazards Identification

Physical State and Appearance	Orange Liquid.
Emergency Overview	Not available.
Routes of Entry	May be harmful by inhalation, ingestion or skin absorption.
Potential Acute Health Effects	
Eyes	Slightly hazardous in case of eye contact (irritant).
Skin	Slightly hazardous in case of skin contact.
Inhalation	Slightly hazardous in case of inhalation
Ingestion	Slightly hazardous in case of ingestion
Potential Chronic Health Effects	Not Available.
Medical Conditions Aggravated by Overexposure	Repeated or prolonged exposure is not known to aggravate medical condition.
Overexposure/Signs/Symptoms	Loss of appetite, inability to concentrate. Headache, irritation of eyes, nose, throat.

Section 4. First Aid Measures

Eye Contact	Immediately flush eyes with copious amounts of water for at least 15 minutes.
Skin Contact	Immediately wash skin with copious amounts of water.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult give oxygen.
Ingestion	Wash out mouth with water provided person is conscious. Loosen clothing such as a collar, tie, belt or waistband. Do not induce vomiting. Provided person is conscious, have victim drink several glasses of water or milk.
Notes to Physician	Not available.

Section 5. Fire Fighting Measures

Flammability of the Product	Flammable.
Auto-ignition Temperature	362.78°C (685°F)
Flash Points	CLOSED CUP: 12.778°C (55°F)
Flammable Limits	The greatest known range is LOWER: 3.3% UPPER: 19% (Ethyl Alcohol)
Products of Combustion	These products are carbon oxides (CO, CO ₂), nitrogen oxides (NO, NO ₂ ...), sulfur oxides (SO ₂ ,

	SO ₃ ...). Some metallic oxides.
Fire Hazards in Presence Of Various Substances	Not available.
Explosion Hazards in Presence of Various Substances	Vapor may travel considerable distance to source of ignition and flash back.
Fire Fighting Media and Instructions	Carbon dioxide, dry chemical powder or appropriate foam. Water spray.
Protective Clothing (Fire)	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Special Remarks on Fire Hazards	Emits toxic fumes under fire conditions.
Special Remarks on Explosion Hazards	Vapor may travel considerable distance to source of ignition and flash back.

Section 6. Accidental Release Measures

Small Spill and Leak	Evacuate area. Shut off all sources of ignition. Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.
Large Spill and Leak	Evacuate area. Shut off all sources of ignition. Cover with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

Section 7, Handling and Storage

Handling	Avoid prolonged exposure or repeated exposure. See section 8.
Storage	Keep away from heat, sparks, and open flame. Store in a cool dry place.

Section 8. Exposure Controls / Personal Protection

Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.
Personal Protection	
Eyes	Safety goggles required.
Body	Protective clothing advised. Lab coat.
Respiratory	Wear appropriate NIOSH/MSHA-approved respirator.
Hands	Chemical resistant gloves.
Feet	Rubber boots advised.
Personal Protection in Case of a Large Spill	Same as above.
Product Name	Exposure Limits
1) Orange G	Not Available
2) Ethyl Alcohol, 95%	TWA: 1900 (ppm) from OSHA (PEL) TWA: 1000 (ppm) from ACGIH (TLV) TWA: 1900 (mg/m ³) TWA: 1000 (mg/m ³)
3) Phosphotungstic Acid	TWA: 1 CIEL: 3 (mg/m ³)
Consult Local authorities before acceptable exposure limits.	

Section 9. Physical and Chemical Properties

Physical State and Appearance	Orange Liquid.	Odor:	Alcohol like.
Molecular Weight	Not applicable.	Taste:	Not available.
Molecular Formula	Not applicable.	Color:	Deep orange.
pH (1%/Water)	Not applicable.		
Boiling/Condensation Point	78.333°C (173°F)		
Melting/Freezing Point	May start to solidify at -89.5°C (-129.1°F) based on data for Ethyl alcohol.		
Critical Temperature	Not applicable.		
Specific Gravity	0.800		
Vapor Pressure	Not applicable.		
Vapor Density	Not applicable.		
Volatility	Not applicable.		
Odor Threshold	Not applicable.		
Evaporation Rate	Not applicable.		
VOC	Not available.		
Viscosity	Not available.		
Ionicity (in water)	Not available.		
Dispersion Properties	Not available.		
Solubility	Soluble in cold water.		

Physical Chemical Comments Not available.

Section 10. Stability and Reactivity

Stability and Reactivity Stable.
 Conditions of Instability Not available.
 Incompatibility with Various Substances Incompatible with strong oxidizing agents.
 Hazardous Decomposition Products Not available.
 Hazardous Polymerization Not available.

Section 11. Toxicological Information

Toxicity to Animals Acute oral toxicity (LD50): 3300 mg/kg [Rat]. (Phosphotungstic Acid).
 LC50: Not available.
 Chronic Effects on Humans May be harmful by inhalation, ingestion, or skin absorption.
 Other Toxic Effects on Humans To the best of our knowledge, the chemical, physical, and toxicological properties have not be thoroughly investigated.
 Special Remarks on Toxicity to Animals Not available.
 Special Remarks on Chronic Effects on Humans Human: Passes through the placenta, excreted in maternal milk. (Ethyl Alcohol)
 Special Remarks on Other Toxic Effects on Humans Not available.

Section 12. Ecological Information

Ecotoxicity Not available.
 BODS and COD Not available.
 Biodegradable/OEDC Not available.
 Mobility Not available.
 Toxicity of the Products of Biodegradation The product itself and its products of degradation are not toxic.
 Special Remarks on The Products of Biodegradation Not available.

Section 13. Disposal Considerations

Waste Information Not available.
 Waste Stream Not available.
 Consult your local or regional authorities.

Section 14. Transport Information

DOT Classification UN1993, Flammable Liquids, n.o.s., (Ethanol), 3, II
 Marine Pollutant Not available.
 Hazardous Substances Reportable Quantity Not available.
 Special Provisions for Transport Not applicable.
 TDG Classification Class 3: Flammable Liquid.
 ADR/RID Classification Class 3: Flammable Liquid A.
 IMO/IMDG Classification Class 3.1 Flammable Liquid (Low flashpoint group of liquids having a flashpoint below -18°C (0°F) c.c.).
 ICAO/IATA Classification See IATA Regulations UN1993, Flammable Liquids, n.o.s., (Ethanol), 3, II

Section 15. Other Information

Label requirements HIGHLY FLAMMABLE LIQUID AND VAPOR, VAPOR MAY CAUSE FLASH FIRE. CONTAINS MATERIAL WHICH MAY CAUSE BLOOD, NERVOUS SYSTEM, REPRODUCTIVE SYSTEM, LIVER, RESPIRATORY TRACT, SKIN, EYES DAMAGE.

Hazardous Material Information System (U.S.A.)	Health	1	National Fire Protection Association (U.S.A.)	
	Fire Hazard	3		
	Reactivity	0		
	Personal Protection	a		
References				
Other Special Considerations				
Notice to Reader				
<i>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.</i>				