

MATERIAL SAFETY DATA SHEET — Butyl Acrylate

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier Butyl Acrylate		[WHMIS Classification]	
Product Use			
Manufacturer's Name		Supplier's Name Ayers International Corp.	
Street Address		Street Address P.O. Box 4312	
City	State	City Greenwich	State New York
Postal Code	Emergency Telephone	Postal Code 06831	Emergency Telephone (800) 424 - 9300
Date MSDS Prepared 07/01/2010	MSDS Prepared By J. Miller	Phone Number (203) 329 - 8919	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients (<i>specific</i>)	%	CAS Number	LD ₅₀ of Ingredient (<i>specify species and route</i>)	LC ₅₀ of Ingredient (<i>specify species</i>)
Butyl Acrylate	99	141-32-2		
Methyl Ether of Hydroquinone	10-20ppm	150-76-5		
Hazardous Ingredients (<i>specific</i>)				

SECTION 3 — HAZARDS IDENTIFICATION

Route of Entry **Inhalation, Skin Absorption, Eye Contact, Skin Contact**

[Emergency Overview]
[WHMIS Symbols]

Potential Health Effects

Inhalation: Causes irritation of the respiratory tract, experienced as nasal discomfort and discharge, with chest pain, coughing, headache, nausea, vomiting, dizziness, drowsiness, disturbed vision and unconsciousness

Eye Contact: Liquid or vapor causes irritation, experienced as stinging, excess blinking and tear production, with excess redness and swelling of the conjunctiva.

Skin Contact: Causes irritation with discomfort, local redness, and possible swelling.

Skin Absorption: Prolonged or widespread contact may result in the absorption of potentially harmful amounts of material.

Swallowing: Slightly toxic. May cause abdominal discomfort, nausea, vomiting and diarrhea. May cause burning or painful sensations in the mouth, throat, chest, and abdomen. Aspiration into the lungs may occur during ingestion or vomiting, resulting in lung injury.

Effects of Repeated Overexposure: Prolonged and repeated overexposure to butyl acrylate vapor may result in damage to the tissues of the nose and upper respiratory tract – an effect typically produced by irritant materials.

Other Effects of Overexposure: Skin contact may cause sensitization and an allergic skin reaction.

Medical Conditions Aggravated by Exposure: Skin contact may aggravate an existing dermatitis. Inhalation of material may aggravate asthma and inflammatory or fibrotic pulmonary disease.

SECTION 4 — FIRST AID MEASURES

Skin Contact Immediately remove contaminated clothing and shoes. Wash skin with soap and water. Obtain medical attention. Wash clothing before reuse. Discard contaminated leather articles such as shoes and belt.

Eye Contact Immediately flush eyes with water and continue washing for several minutes. Remove contact lenses, if worn. Obtain medical attention.

Inhalation Remove to fresh air. Give artificial respiration if not breathing. If breathing is difficult, oxygen may be given by qualified personnel. Obtain medical attention.

Ingestion If patient is fully conscious, give two glasses of milk or water at once. Do not induce vomiting. Obtain medical attention without delay.

SECTION 5 — FIRE FIGHTING MEASURES

Flammable <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, under which conditions?	
Means of Extinction Extinguish fires with water spray or apply alcohol-type or all-purpose-type foam by manufacturer's recommended techniques for large fires. Use carbon dioxide or dry chemical media for small fires.		
Flashpoint (°C) and Method Closed Cup – 39°C Open Cup – 48°C	Upper Flammable Limit (% by volume) 9.9%	Lower Flammable Limit (% by volume) 1.3%
Autoignition Temperature (°C) No test data available	Explosion Data — Sensitivity to Impact	Explosion Data — Sensitivity to Static Discharge
Hazardous Combustion Products Burning can produce the following products: Carbon monoxide and/or carbon dioxide. Carbon monoxide is highly toxic if inhaled; carbon dioxide in sufficient concentrations can act as an asphyxiant.		
[NFPA]		

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Leak and Spill Procedures
Steps to be taken if material is released or spilled: Collect for disposal.
Personal Precautions: Wear suitable protective equipment. Avoid contact with liquid and vapors.
Environmental Precautions: Avoid runoff to waterways and sewers.

SECTION 7 — HANDLING AND STORAGE

Handling Procedures and Equipment

General Handling: Avoid breathing vapor. Do not get in eyes, on skin, on clothing. Keep away from heat and flame. Do not swallow. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. FOR INDUSTRY USE ONLY.

Ventilation: Butyl acrylate has an unpleasant odor that can be detected at low concentrations in air (~0.006 ppm). General (mechanical) room ventilation should be satisfactory, if this product is confined within closed equipment. Use special, local ventilation at points where vapors are expected to be vented to the workplace air.

Storage Requirements

Material should be kept below 54°C during shipping and short-term storage and below 38°C for extended storage. This product is inhibited with 1 to 120ppm MEHQ (monomethyl ether of hydroquinone). Check the inhibitor concentration at intervals and add inhibitor as needed. Do not store butyl acrylate under pure nitrogen or sparge it with nitrogen or other oxygen-free gas. Some dissolved oxygen should be present in the liquid for the inhibitor to be effective.

SECTION 8 — EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure Limits	<input checked="" type="checkbox"/> ACGIH TLV	<input type="checkbox"/> OSHA PEL	<input type="checkbox"/> Other (specify)
Butyl Acrylate	2 ppm TWA8		
Methyl Ether of Hydroquinone	5 mg/m3 TWA8		
In the exposure limits chart above, the listed limit includes all airborne forms of the substance that can be inhaled.			
Exposure by the cutaneous (skin) route is not a potential significant contributor to overall exposure.			
Personal Protective Equipment	<input checked="" type="checkbox"/> Gloves	<input checked="" type="checkbox"/> Respirator	<input checked="" type="checkbox"/> Eye
		<input type="checkbox"/> Footwear	<input checked="" type="checkbox"/> Clothing
			<input checked="" type="checkbox"/> Other
	Monogoggles	Chemical Apron	Eye Bath, Safety Shower

Process Hazard: Sudden release of hot organic chemical vapor or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into hot equipment under a vacuum, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated-temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Physical State Liquid	Odor and Appearance Appearance: Colorless Odor: Sharp, Fragrant	Odor Threshold (ppm)
Specific Gravity .900 (20°C / 20°C)	Vapor Density (air = 1) 4.4	Vapor Pressure (mmHg) 3.3 mmHg (20°C)
Evaporation Rate .33	Boiling Point (° C) 149	Freezing Point (° C) -64
pH No test data available.	Coefficient of Water/Oil Distribution	[Solubility in Water] .1% (20°C)

SECTION 10 — STABILITY AND REACTIVITY

Chemical Stability	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If no, under which conditions?
Incompatibility with Other Substances	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, which ones? Avoid contact with strong acids, alkalis, oxidizing agents, polymerization initiators, heat, flame, sunlight, x-rays, or ultraviolet radiation.

Hazardous Polymerization may occur.

Conditions to Avoid: Avoid storage in a completely inert atmosphere since some oxygen is required to inhibit polymerization. Do not sparge with inert gas, such as pure nitrogen. Do not heat; inhibitor is ineffective at elevated temperatures. Avoid contact with strong alkalis that will extract the inhibitor.

Inhibitor: Monomethyl ether of Hydroquinone.

Storage: This product is inhibited with 10 to 120 ppm MEHQ. Check the inhibitor concentration at intervals and add inhibitor as needed. Do not store butyl acrylate under pure nitrogen or sparge it with nitrogen or other oxygen-free gas. Some dissolved oxygen should be present in the liquid for the inhibitor to be effective.

SECTION 11 — TOXICOLOGICAL INFORMATION

Effects of Acute Exposure

Peroral: Rat = 12.8 ml/kg Mortality: 5/5 Major Signs: Sluggishness Gross Pathology: Liver and kidneys discolored	Peroral: Rat = 6.4 ml/kg Mortality: 0/5 Major Signs: Sluggishness Gross Pathology: Liver and kidneys discolored	Peroral: Rat; LD50 = 3.73 (2.68 – 5.21) g/kg; 20% dispersion in 1% Tergitol 7. Gross Pathology: Fluid in peritoneal and pleural cavity, lungs, gastrointestinal tract, kidneys discolored	Percutaneous: Rabbit; LD50=2.00 (1.23 – 3.26) ml/kg; 24 h occluded. Major Signs: Iritis Gross Pathology: Liver, kidneys, spleen discolored	Inhalation: Vapor Study not fasted rat; 4 hours; LC50=1414 (1032 – 1938) ppm Major Signs: Gasping, loss of coordination Gross Pathology: Lungs discolored
Inhalation: Vapor Study not-fasted rat; 4 hours; LC50=758 (612 – 939) ppm Major Signs: Gasping, Loss of coordination Gross Pathology: Lungs discolored		Irritation Skin: Rabbit; 24 h uncovered Results: moderate to marked erythema Eye: Rabbit; 0.5 ml Results: moderate to severe corneal injury; iritis in 2/5		

Effects of Chronic Exposure

Significant Data with Possible Relevance to Humans: Chronic (lifetime) inhalation exposure of rats to butyl acrylate vapor produced degenerative lesions in the nasal passages and partially reversible corneal opacification.

Additional Studies: Prolonged and repeated overexposure to butyl acrylate vapor may result in damage to the tissues of the nose and upper respiratory tract – an effect typically produced by irritant materials. Based upon analogy to methyl acrylate and ethyl acrylate, skin contact with butyl acrylate may cause sensitization and an allergic skin reaction.

Skin sensitization	Respiratory sensitization
Carcinogenicity-IARC	Carcinogenicity - ACGIH
Reproductive toxicity	Teratogenicity
Embrototoxicity	Mutagenicity
Name of synergistic products/effects	

Please continue on reverse side

SECTION 12 — ECOLOGICAL INFORMATION

Toxicity to Fish:

Fathead Minnow; 94h; LC50

Result value: 5.7 mg/l

Further Information

Theoretical Oxygen Demand (THOD) – calculated: 2.25 mg/mg

Octanol/Water Partition Coefficient – Measured: 2.36

BOD (% Oxygen consumption)	Day 5	Day 10	Day 15	Day 20	Day 28/30
		42 %	50 %		62 %

SECTION 13 — DISPOSAL CONSIDERATIONS

Waste Disposal

Do not dump into any sewers, on the ground, or into any body of water. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Ayers International has no control over the management practices or manufacturing processes of parties handling or using this material. This information presented here pertains only to the product as shipped in its intended condition as described in MSDS section 2 (composition / information on ingredients). For unused and uncontaminated product, the preferred options include sending to a licensed, permitted incinerator or other thermal destruction device.

SECTION 14 — TRANSPORT INFORMATION

Special Shipping Information: US D.O.T.

Non-Bulk	PIN
Proper Shipping Name: Not Regulated	
Bulk Proper Shipping Name: Butyl Acrylates, Stabilized Hazard Class: 3 ID Number: UN2348 Packing Group: PG III	This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

SECTION 15 — REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right to Know Act) Section 313: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act 1986 and 40 CFR Part 372. Component: Butyl Acrylate CAS #: 141-32-2 Amount: >= 99.0000%	[OSHA] This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
	[TSCA] All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.
Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103	This product contains the following substances subject to CERCLA Section 103 reporting requirements and are listed in 40 CFR Part 302.4 Component: n-Butyl acetate CAS #: 123-86-4 Amount: <= 0.1532%
Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right to Know Act) Section 302	This product contains the following substances subject to SARA Section 302 reporting requirements and are listed in 40 CFR Part 302.4 To the best of our knowledge this product does not contain chemicals at levels which require reporting under this statute.
Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right to Know Act) Sections 311 and 312	Delayed (Chronic) Health Hazard: Yes Fire Hazard: Yes Immediate (Acute) Health Hazard: Yes Reactive Hazard: Yes Sudden Release of Pressure Hazard: No

European Inventory of Existing Commercial Chemical Substances (EINECS)	The components of this product are on the EINECS inventory or are exempt from EINECS inventory requirements.	
Pennsylvania (Worker and Community Right to Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List	The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting. Component: Butyl Acrylate CAS#: 141-32-2 Amount: >=99.0000 %	
Pennsylvania (Worker and Community Right to Know Act): Pennsylvania Special Hazardous Substances List	To the best of our knowledge this product does not contain chemicals at levels which require reporting under this statute.	
California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)	WARNING: This product contains a chemical known to the State of California to cause cancer.	
California SCAQMD Rule 443.1 (South Coast Air Quality Management District Rule 443.1, Labeling of Materials Containing Organic Solvents)	VOC: Vapor Pressure 3.26 mmHg @ 20°C, 898 g/l	
Butanol	71-36-3	<= 0.0120 %
Ethyl Acrylate	140-88-5	<= 0.0064%
Isobutanol	78-83-1	<= 0.0004%
Hydroquinone	123-31-9	<= 0.0004%
Acrylic Acid	79-10-7	<= 0.0071%
<i>This section provides selected regulatory information on this product including its components. This is not intended to include all regulations. It is the responsibility of the user to know and comply with all applicable rules, regulations and laws relating to the product being used.</i>		

SECTION 16 — OTHER INFORMATION**Hazard Rating System**

NFPA ratings for this product are: H – 2 F – 2 R – 2

These ratings are part of a specific hazard communication program and should be disregarded where individuals are not trained in the use of this hazard rating system. You should be familiar with the hazard communication programs applicable to your workplace.

Recommended Uses and Restrictions

For industry use only

Revision

Version: 1

Revision: 07/06/2010