



# BUTYL ACRYLATE PROCESS WASTE STREAM - HEAVIES

Material Safety Data Sheet

Arkema Inc.

## 1 PRODUCT AND COMPANY IDENTIFICATION

### Acrylic Monomers

Arkema Inc.  
2000 Market Street  
Philadelphia, PA 19103

### EMERGENCY PHONE NUMBERS:

Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887  
Medical: Rocky Mountain Poison Control Center  
(866) 767-5089 (24Hrs)

Information Telephone Numbers	Phone Number	Available Hrs
Customer Service	800-338-1015	8:00 to 6:00 EST

Product Name BUTYL ACRYLATE PROCESS WASTE STREAM - HEAVIES

Product Synonym(s)

Chemical Family Mixture

Chemical Formula Mixture

Chemical Name

EPA Reg Num

Product Use

## 2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS RegistryNumber	Typical Wt. %	OSHA
n-Butyl butoxypropionate	14144-48-0	45 - 55	N
Mixed butyl acrylate polymers	NE	25 - 35	N
Butyl acrylate	141-32-2	10 - 20	Y
Phenothiazine	92-84-2	1 - 10	Y
Monomethyl ether of hydroquinone (MEHQ)	150-76-5	0.1 - 2	Y
Furfural	98-01-1	0.1 - 2	Y

The substance(s) marked with a "Y" in the OSHA column, are identified as hazardous chemicals according to the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200)

This material is classified as hazardous under Federal OSHA regulation.

FOR RESEARCH AND DEVELOPMENT USE ONLY BY TECHNICALLY QUALIFIED INDIVIDUALS UNDER SECTION 5(h)(3) OF THE TOXIC SUBSTANCES CONTROL ACT. THE PROPERTIES OF THIS MATERIAL HAVE NOT BEEN FULLY INVESTIGATED. USE DUE CAUTION IN HANDLING AND USE OF THIS MATERIAL.

## 3 HAZARDS IDENTIFICATION

### Emergency Overview

Clear liquid with pungent odor

#### WARNING!

MAY CAUSE EYE AND SKIN IRRITATION.

MAY CAUSE ALLERGIC SKIN REACTION.

MAY CAUSE RESPIRATORY TRACT IRRITATION.

CAN CAUSE BLOOD, LIVER AND KIDNEY DAMAGE

CAN CAUSE LIGHT-INDUCED SKIN REACTION

COMBUSTIBLE LIQUID AND VAPOR.

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## Potential Health Effects

Inhalation and skin contact are expected to be the primary routes of occupational exposure to this material. Based on its composition, it is anticipated to be moderately irritating to the eyes, skin and respiratory tract. Repeated exposure may cause an allergic skin reaction. Contact may also cause severe itching, redness and discoloration of hair and fingernails. A component of this material may cause light-induced skin reactions (photosensitization), and may cause blood, liver or kidney effects.

## 4 FIRST AID MEASURES

IF IN EYES, immediately flush with plenty of water. Get medical attention if irritation persists.

IF ON SKIN, immediately wash with soap and plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Thoroughly clean shoes before reuse.

IF SWALLOWED, induce vomiting as directed by medical personnel. Get medical attention. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

IF INHALED, remove to fresh air. If breathing is difficult, get medical attention.

## 5 FIRE FIGHTING MEASURES

### Fire and Explosive Properties

Auto-Ignition Temperature	NE	
Flash Point	67 C (152.6 F)	Flash Point Method
Flammable Limits- Upper	NE	
Lower	NE	

### Extinguishing Media

Use water spray, carbon dioxide, foam or dry chemical.

### Fire Fighting Instructions

Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand NIOSH approved or equivalent). Fire fighting equipment should be thoroughly decontaminated after use.

### Fire and Explosion Hazards

When burned, the following hazardous products of combustion can occur:  
Oxides of carbon

A large amount of heat can be generated when monomers are exposed to a fire. Heated sealed containers can explode.

## 6 ACCIDENTAL RELEASE MEASURES

**6 ACCIDENTAL RELEASE MEASURES****In Case of Spill or Leak**

Stop the leak if you can do so without risk. Ventilate the area and remove all ignition sources. Contain the spill by building a dike using absorbent material. Collect the liquid and solid absorbent into a drum approved for waste disposal. Contaminated monomer may be unstable. Add inhibitor to prevent polymerization.

The product can be neutralized with sodium bicarbonate, lime, or soda ash. CAUTION: neutralization of the acid may result in an exothermic reaction, accompanied by some spattering of unreacted material. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

**7 HANDLING AND STORAGE****Handling**

Keep away from heat, sparks and flames.  
Keep container closed.  
Use only with adequate ventilation.  
Avoid contact with eyes, skin and clothing.  
Avoid prolonged or repeated contact with skin.  
Wash thoroughly after handling.  
Use grounding and bonding connection when transferring material to prevent static discharges, fire or explosion.  
Use spark resistant tools.  
Use explosion proof equipment.

Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

**Storage**

This product should be stored in a closed container, away from direct sunlight, at ambient temperatures. Storage of this product at elevated temperatures (>30 C or >85 F) reduces the shelf-life. The typical shelf-life for this product is 12 months. An air space is required above the liquid in all containers; avoid storage under an oxygen-free atmosphere.

The stability of this product should be checked periodically; typically every 90 days for bulk containers. Materials recommended for packaging include: stainless steel, aluminum, glass, HDPE, PP or PTFE.

**8 EXPOSURE CONTROLS / PERSONAL PROTECTION****Engineering Controls**

Investigate engineering techniques to reduce exposures. Provide ventilation if necessary to minimize exposure. Dilution ventilation is acceptable, but local mechanical exhaust ventilation preferred, if practical, at sources of air contamination such as open process equipment. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems.

**Eye / Face Protection**

Where there is potential for eye contact, wear chemical goggles and have eye flushing equipment available.

**8 EXPOSURE CONTROLS / PERSONAL PROTECTION****Skin Protection**

Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove material for given application. Wear face shield and chemical resistant clothing such as a rubber apron when splashing may occur. Rinse contaminated skin promptly. Wash contaminated clothing and clean protective equipment before reuse. Wash skin thoroughly after handling.

**Respiratory Protection**

Avoid breathing fume. When airborne exposure limits are exceeded (see below), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

**Airborne Exposure Guidelines for Ingredients**

Exposure Limit		Value
<b>Butyl acrylate</b>		
ACGIH Sensitizer Designator	-	Y
ACGIH TWA	-	2 ppm (11 mg/m <sup>3</sup> )
<b>Phenothiazine</b>		
ACGIH Skin designator	-	Y
ACGIH TWA	-	5 mg/m <sup>3</sup>
<b>Monomethyl ether of hydroquinone (MEHQ)</b>		
ACGIH TWA	-	5 mg/m <sup>3</sup>
<b>Furfural</b>		
ACGIH Skin designator	-	Y
ACGIH TWA	-	7.9 mg/m <sup>3</sup> 2 ppm
OSHA Skin designator	-	Y
OSHA TWA PEL	-	20 mg/m <sup>3</sup> 5 ppm

-Only those components with exposure limits are printed in this section.

-Skin contact limits designated with a "Y" above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required.

-ACGIH Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic reactions.

-WEEL-AIHA Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic skin reactions.

**9 PHYSICAL AND CHEMICAL PROPERTIES**

Appearance/Odor	Clear liquid with pungent odor
pH	NE
Specific Gravity	NE
Vapor Pressure	NE
Vapor Density	NE
Melting Point	NA
Freezing Point	NE
Boiling Point	NE
Solubility In Water	NE
Other Physical Data	Density: 0.934 metric tons/m <sup>3</sup> @ 25 C Viscosity: 1.7 cP @ 104 F

**10 STABILITY AND REACTIVITY****Stability**

This material is chemically stable under normal and anticipated storage and handling conditions. However, this material can undergo hazardous polymerization. See Hazardous Polymerization below for conditions to avoid.

**Hazardous Polymerization**

An uncontrolled polymerization may produce a rapid release of energy with the potential for an explosion of unvented closed containers or inadequately vented containers.

**Incompatibility**

This material may polymerize exothermically in the presence of heat, contamination, free radicals, peroxides, and depletion of inhibitor.

**Hazardous Decomposition Products**

None known.

**11 TOXICOLOGICAL INFORMATION****Toxicological Information**

Data on this material and/or its components are summarized below.

**Butyl Acrylate**

Single exposure (acute) studies indicate that this material is slightly toxic to practically non-toxic if swallowed (rat LD50 3,700-9,100 mg/kg), slightly toxic if absorbed through skin (rabbit LD50 1,800-3,400 mg/kg), practically non-toxic if inhaled (rat 4-hr LC50 10.2-14.0 mg/l; 1-hr LC50 22.9 mg/l), moderately irritating to rabbit eyes and severely irritating to rabbit skin.

Skin allergy was observed in guinea pigs following repeated exposure. Following repeated inhalation, eye and nose irritation, increased liver weights and respiratory tract damage (only at levels producing death in most animals) were reported in rats. Following repeated exposure in their drinking water, rats exhibited decreased weight gain and water consumption. Repeated oral administration (gavage) produced a slight increase in liver weight in rats. Long-term inhalation by rats produced nasal mucosa changes and changes in relative heart and

**11 TOXICOLOGICAL INFORMATION**

liver weights with partially reversible eye (cornea) changes. No tumors were observed in this study. No skin tumors were observed in mice following life time skin application. No birth defects were observed in the offspring of rats exposed during pregnancy at levels which produced adverse effects on the mothers, including reduced weight gain, eye and nasal irritation, and embryoletality. Birth defects and embryoletality were observed in mice exposed orally during pregnancy at doses producing adverse effects, including death, in the mothers. Generally, no genetic changes were observed in tests using bacteria, animal cells or animals. On positive response has been reported in a test using animals.

**Phenothiazine**

Single exposure (acute) studies indicate that this material is slightly toxic if swallowed (rat LD50 5,000 mg/kg), practically non-toxic if absorbed through skin (rabbit LD50 >9,400 mg/kg), practically non-toxic if inhaled (rat 1-hr LC50 >200 mg/l) and non-irritating to rabbit eyes (0.0/110) and skin (0.0/8.0).

Light-induced skin reactions have occurred in humans. Heart effects were observed in the offspring of women who took this material for therapeutic purposes during pregnancy. Repeated oral administration produced effects in the liver and kidneys of rabbits. Adverse effects on the blood and spleen were observed in dogs following repeated oral exposure. Generally, no genetic changes were observed in tests using bacteria or animal cells. A positive response was reported in two tests using animal cells.

**12 ECOLOGICAL INFORMATION****Ecotoxicological Information**

Data on this material and/or its components are summarized below.

**Butyl Acrylate**

This material is moderately toxic to algae (96-hr LC50 5.5 mg/l), *Daphnia magna* (48-hr EC50 8.2 mg/l), sheepshead minnow (96-hr LC50 2.1 mg/l) and rainbow trout (96-hr LC50 5.2 mg/l).

**Chemical Fate Information**

Data on this material and/or its components are summarized below.

**Butyl Acrylate**

This material is readily biodegradable (BOD5/COD = 0.6; 14-day BOD 61%; 28-day BOD 57.8%) and slightly bioaccumulable (log Pow = 2.4). It is slowly hydrolyzed in water and the half-life is effected by the pH (4-hours at pH 11; 2800-days at pH 7; 1100 days at pH 3).

**13 DISPOSAL CONSIDERATIONS****Waste Disposal**

Incineration is the recommended method for disposal observing all local, state and federal regulations.



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## 14 TRANSPORT INFORMATION

DOT Name	Combustible liquids, n.o.s.
DOT Technical Name	(Butyl acrylate)
DOT Hazard Class	3
UN Number	NA 1993
DOT Packing Group	PG III
RQ	No
DOT Special Information	Regulated in bulk shipments only.

## 15 REGULATORY INFORMATION

### Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370)

Immediate (Acute) Health	Y	Fire	Y
Delayed (Chronic) Health	N	Reactive	Y
		Sudden Release of Pressure	N

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### Ingredient Related Regulatory Information:

#### SARA Reportable Quantities

SARA Reportable Quantities	CERCLA RQ	SARA TPQ
Butyl acrylate	NE	
Phenothiazine	NE	
Monomethyl ether of hydroquinone (MEHQ)	NE	
Furfural	5000 LBS	
n-Butyl butoxypropionate	NE	

#### SARA Title III, Section 313

This product does contain chemical(s) which are defined as toxic chemicals under and subject to the reporting requirements of, Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372. See Section 2

Butyl acrylate

#### Massachusetts Right to Know

This product does contain the following chemical(s), as indicated below, currently on the Massachusetts Right to Know Substance List.

- Butyl acrylate
- Furfural
- Monomethyl ether of hydroquinone (MEHQ)
- Phenothiazine

#### New Jersey Right to Know

This product does contain the following chemical(s), as indicated below, currently on the New Jersey Right-to-Know Substances List.

- Butyl acrylate
- Furfural
- Monomethyl ether of hydroquinone (MEHQ)
- Phenothiazine

#### Pennsylvania Environmental Hazard

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Environmental Hazard List.

- Butyl acrylate
- Furfural



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## Pennsylvania Right to Know

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Hazardous Substance List.

Butyl acrylate

Furfural

Monomethyl ether of hydroquinone (MEHQ)

Phenothiazine

## 16 OTHER INFORMATION

### Revision Information

Revision Date 11 OCT 2004 Revision Number 4  
Supercedes Revision Dated 27-SEP-2001

### Revision Summary

A TOFINA Chemicals, Inc. has changed its name to Arkema Inc.

### Key

NE= Not Established NA= Not Applicable (R) = Registered Trademark

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