

**Product Information (203) 740-3471 / Emergency Assistance CHEMTREC 1-800-424-9300
or 202-483-7616**

MATERIAL SAFETY DATA SHEETS

Part Number/Trade Name: CHLOROBUTANE, BUTYL CHLORIDE
This MSDS is valid for all grades that start with catalog number 344

General Information

Company's Name: PHARMCO PRODUCTS, INC.	Safety Data Review Date: 8/23/99
Company's Street: 58 VALE RD.	Preparer's Company: PHARMCO PRODUCTS, INC.
Company's City: BROOKFIELD	Preparer's St Or P. O. Box: 58 VALE RD.
Company's State: CT	Preparer's City: BROOKFIELD
Company's Zip Code: 06804	Preparer's State: CT
Company's Emerg Ph #: (203) 740-3471	Preparer's Zip Code: 06804
Company's Info Ph #: (203) 740-3471	
Date MSDS Revised: 8/23/99	

Ingredients/Identity Information

Ingredient: N-BUTYL CHLORIDE *94-4*	NIOSH (RTECS) Number: EJ6300000
Ingredient Sequence Number: 01	CAS Number: 109-69-3
Percent: 100	

Physical/Chemical Characteristics

Appearance And Odor: CLEAR COLORLESS LIQUID W/A SHARP UNPLEASANT ODOR	Vapor Density (Air=1): 3.2
Boiling Point: 173.12F	Specific Gravity: 0.886
Melting Point: -189.58F	Evaporation Rate And Ref: (BU AC = 1): 10
Vapor Pressure (MM Hg/70 F): 80.1	Solubility In Water: 0.11
	Percent Volatiles By Volume: 100

Fire and Explosion Hazard Data

Flash Point: 14F	FIRE-EXPOSED CONTAINERS COOL W/WATER SPRAY.
Flash Point Method: TCC	Unusual Fire And Expl Hazrds: HEAT WILL BUILD PRESSURE & MAY RUPTURE
Lower Explosive Limit: 1.8	CLOSED STORAGE CONTAINERS.
Upper Explosive Limit: 10.1	AUTOIGNITION TEMP 860F. VERY VOLATILE &
Extinguishing Media: CO2, DRY CHEMICAL, FOAM.	EXTREMELY FLAMMABLE.
Special Fire Fighting Proc: WEAR FULL PROTECTIVE CLOTHING & SCBA. KEEP	

Reactivity Data

Stability: YES	Materials To Avoid: ACTIVE METALS & STRONG BASES.
Cond To Avoid (Stability): HEAT, SPARKS, OPEN FLAME, TEMP EXTREMES, DIRECT SUNLIGHT.	Hazardous Decomp Products: INCOMPLETE COMBUSTION CAN GENERATE PHOSGENE,

HYDROGEN CHLORIDE & OTHER TOXIC
VAPORS.

Hazardous Poly Occur: NO

Health Hazard Data

Route Of Entry - Inhalation: YES
Route Of Entry - Skin: YES
Route Of Entry - Ingestion: YES
Health Haz Acute And Chronic: INHALATION: EXPOSURE CAN CAUSE DEPRESSION/
STIMULATION OF THE CENTRAL NERVOUS SYSTEM. EYES: IRRITATION. SKIN: MILD
IRRITATION & DERMATITIS. INGESTION: CAN CAUSE GI TRACT DISCOMFORT.
Carcinogenicity - NTP: NO
Carcinogenicity - IARC: NO
Carcinogenicity - OSHA: NO
Explanation Carcinogenicity: NONE
Signs/Symptoms Of Overexp: IRRITATION, DEFATTING.
Med Cond Aggravated By Exp: PRECLUDE FROM EXPOSURE THOSE INDIVIDUALS
SUSCEPTIBLE TO DERMATITIS.
Emergency/First Aid Proc: INHALATION: IMMEDIATELY REMOVE TO FRESH AIR.
GIVE MOUTH TO MOUTH/CPR IF NEEDED. EYES: RINSE W/COPIOUS AMOUNTS OF WATER
FOR 15 MINS. SKIN: FLUSH THOROUGHLY FOR 15 MINS. WASH W/SOAP & WATER.
INGESTION: NEVER INDUCE VOMITING/GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS/
CONVULSIVE PERSON. OBTAIN MEDICAL ATTENTION IN ALL CASES.

Precautions for Safe Handling and Use

Steps If Matl Released/Spill: PROTECT FROM IGNITION. WEAR PROTECTIVE
CLOTHING & USE APPROVED RESPIRATOR EQUIPMENT. ABSORB MATERIAL IN AN
ABSORBENT RECOMMENDED FOR SOLVENTS & REMOVE TO A SAFE LOCATION FOR
DISPOSAL.
Waste Disposal Method: DISPOSE OF IAW/FEDERAL, STATE & LOCAL REGULATIONS.
EPA HAZARDOUS WASTE: D001 (IGNITABLE).
Precautions-Handling/Storing: STORE IN A PROTECTED & SECURE FLAMMABLE
LIQUID STORAGE ROOM. GROUND & BOND METAL CONTAINERS TO MINIMIZE STATIC
SPARKS.
Other Precautions: AVOID OPEN CONTAINERS & POOR VENTILATION.

Control Measures

Respiratory Protection: USE APPROVED RESPIRATOR EQUIPMENT, AIR-PURIFYING,
AIR-SUPPLIED/SCBA.
Ventilation: ADEQUATE: LOCAL/GENERAL
Protective Gloves: NEOPRENE/NITRILE RUBBER
Eye Protection: SAFETY GLASSES/GOGGLES/FACE SHIELD
Other Protective Equipment: EYE WASH FOUNTAINS, SAFETY SHOWERS.
Work Hygienic Practices: REMOVE/LAUNDER CONTAMINATED CLOTHING & SHOES
BEFORE REUSE. DISCARD CONTAMINATED SHOES.

Transportation Data

DOT: Chlorobutane, 3, UN1127, PG II

Disposal Data

Refer to applicable regional, state and federal codes.

Label Data

Common Name: N-BUTYL CHLORIDE

Special Hazard Precautions: INHALATION: EXPOSURE CAN CAUSE DEPRESSION/
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IRRITATION & DERMATITIS. INGESTION: CAN CAUSE GI TRACT DISCOMFORT.
IRRITATION, DEFATTING.

The information contained herein is based on data considered to be accurate. However, no warranty is expressed regarding the accuracy of these data or the results to be obtained from the use thereof. It is the user's obligation to determine the conditions of safe use of the product.