Material Safety Data Sheet
Benzyl chloride, pract., 90%

ACC# 97056

Section 1 - Chemical Product and Company Identification

MSDS Name: Benzyl chloride, pract., 90%
Catalog Numbers: AC405100000, AC405100010, AC405100040
Synonyms: Chloromethylbenzene; Alpha-Chlorotoluene; Chlorophenylmethane; Benzyl chloride.
Company Identification:

Acros Organics N.V.
One Reagent Lane
Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01
For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
100-44-7	Benzyl chloride	90	202-853-6

Hazard Symbols: T
Risk Phrases: 22 23 37/38 41 45 48/22

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear, colorless liquid. Flash Point: 67 deg C. Moisture sensitive. Cancer suspect agent. Causes skin irritation. Causes respiratory tract irritation. Causes severe eye irritation and possible eye injury. Lachrymator (substance which increases the flow of tears). **Combustible liquid and vapor.** Harmful if swallowed. **Danger!** May be fatal if inhaled. Corrosive to metal. Hazardous polymerization may occur. Check internal container upon receipt. Bottles should be vented periodically to relieve pressure.
Target Organs: Central nervous system, lungs, eyes, skin, mucous membranes.

Potential Health Effects

Eye: Causes eye irritation. Lachrymator (substance which increases the flow of tears). May cause chemical conjunctivitis and corneal damage.
Skin: Causes skin irritation. Skin allergy has been reported in rats and guinea pigs following repea ted skin application.
Ingestion: Harmful if swallowed. May cause severe irritation of the digestive tract.
Inhalation: May be fatal if inhaled. Causes respiratory tract irritation. Symptoms may include coughing, dizziness, weakness, headache, tremors in eyelids and fingers, increased bilirubin in blood and decrease in n umber of leukocytes. Lung damage, pulmonary edema, and CNS depression are all possible from severe exposure.
Chronic: Potential cancer hazard.

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.
Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.
Ingestion: If swallowed, do NOT induce vomiting. Get medical aid immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.
Inhalation: Poison material. If inhaled, get medical aid immediately. Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Use water spray to keep fire-exposed containers cool. May accumulate static electrical charges, and may cause ignition of its own vapors. Fire or excessive heat may result in violent rupture of the container due to bulk polymerization. Combustible liquid and vapor. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas.
Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or appropriate foam.
Flash Point: 67 deg C (152.60 deg F)
Autoignition Temperature: 627 deg C (1,160.60 deg F)
Explosion Limits, Lower:1.3 %
Upper: 7.1 %
NFPA Rating: (estimated) Health: 3; Flammability: 2; Instability: 1

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. Approach spill from upwind.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Ground and bond containers when transferring material. Do not get in eyes, on skin, or on clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Use only with adequate ventilation. Keep away from heat and flame. Do not breathe vapor or mist. Keep dry and use promptly. Handle only in corrosion resistant equipment avoiding iron, aluminum, and brass.
Storage: Keep away from sources of ignition. Store in a cool, dry, well-ventilated area away from incompatible substances. Storage for long periods is not recommended. Store protected from moisture. Vent periodically. Keep away from oxidizing agents.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Benzyl chloride	1 ppm TWA	10 ppm IDLH	1 ppm TWA; 5 mg/m3 TWA

OSHA Vacated PELs: Benzyl chloride: 1 ppm TWA; 5 mg/m3 TWA
Personal Protective Equipment
Eyes: Wear chemical goggles.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance: clear, colorless
Odor: pungent odor - unpleasant odor
pH: Not available.
Vapor Pressure: 1.3 mm Hg @ 25 deg C
Vapor Density: 4.37 (Air=1)
Evaporation Rate: Not available.
Viscosity: 1.27 cps @ 20 deg C
Boiling Point: 179 deg C @ 760 mm Hg
Freezing/Melting Point:-39 deg C
Decomposition Temperature: Not available.
Solubility: Hydrolyzes slowly
Specific Gravity/Density:1.1000 g/cm3
Molecular Formula:C7H7Cl
Molecular Weight:126.59

Section 10 - Stability and Reactivity

Chemical Stability: Unstabilized benzyl chloride undergoes a self-condensation reaction in the presence of all common metals (except nickel and lead) with the liberation of heat and hydrogen chloride. Decomposition and polymerization reactions are inhibited to a limited extent by addition of triethylamine, propylene oxide, or sodium carbonate. Inhibition decreases during storage. Do not store for extended period of time.
Conditions to Avoid: Light, ignition sources, moisture, excess heat, excessive aging.
Incompatibilities with Other Materials: Metals, strong oxidizing agents.
Hazardous Decomposition Products: Hydrogen chloride, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.
Hazardous Polymerization: May occur.

Section 11 - Toxicological Information

RTECS#:
CAS# 100-44-7: XS8925000
LD50/LC50:
Not available.

Carcinogenicity:
CAS# 100-44-7:
ACGIH: A3 - Animal Carcinogen
California: carcinogen; initial date 1/1/90
OSHA: Possible Select carcinogen
IARC: Group 2A carcinogen

Epidemiology: No information available.
Teratogenicity: No information available.
Reproductive Effects: No information available.
Neurotoxicity: No information available.
Mutagenicity: No information available.
Other Studies: No data available.

Section 12 - Ecological Information

Ecotoxicity: Fish: Fathead Minnow: 34.7 ppm; 96 hr; LC50 flea Daphnia: 6.1 ppm; 48 hr; LC50 No data available.
Environmental: Material is highly biodegradable.
Physical: No information available.
Other: No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: CAS# 100-44-7: waste number P028.
RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	IATA	RID/ADR	IMO	Canada TDG
Shipping Name:	BENZYL CHLORIDE				No information available.
Hazard Class:	6.1				
UN Number:	UN1738				
Packing Group:	II				

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 100-44-7 is listed on the TSCA inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
SARA

CERCLA Hazardous Substances and corresponding RQs
CAS# 100-44-7: 100 lb final RQ; 45.4 kg final RQ
SARA Section 302 Extremely Hazardous Substances
CAS# 100-44-7: 500 lb TPQ; 100 lb EPCRA RQ
SARA Codes
CAS # 100-44-7: acute, chronic, flammable, reactive.
Section 313
This material contains Benzyl chloride (CAS# 100-44-7, 90%),which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.
Clean Air Act:
CAS# 100-44-7 is listed as a hazardous air pollutant (HAP). This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors.
Clean Water Act:
CAS# 100-44-7 is listed as a Hazardous Substance under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.
STATE
CAS# 100-44-7 can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.
The following statement(s) is(are) made in order to comply with the California Safe Drinking Water Act: WARNING: This product contains Benzyl chloride, a chemical known to the state of California to cause cancer. California No Significant Risk Level: CAS# 100-44-7: 4 ug/day NSRL

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols:
T
Risk Phrases:
R 22 Harmful if swallowed.

R 23 Toxic by inhalation.
R 37/38 Irritating to respiratory system and skin.
R 41 Risk of serious damage to eyes.
R 45 May cause cancer.
R 48/22 Harmful : danger of serious damage to health by prolonged exposure if swallowed.

Safety Phrases:
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S 53 Avoid exposure - obtain special instructions before use.

WGK (Water Danger/Protection)
CAS# 100-44-7: 3
Canada - DSL/NDSL
CAS# 100-44-7 is listed on Canada's DSL List.
Canada - WHMIS
This product has a WHMIS classification of E, B3, D1B, D2A.
Canadian Ingredient Disclosure List
CAS# 100-44-7 is listed on the Canadian Ingredient Disclosure List.
Exposure Limits
CAS# 100-44-7: OEL-AUSTRALIA:TWA 1 ppm (5 mg/m3) OEL-AUSTRIA:TWA 1 ppm (5 mg/m3) OEL-BELGIUM:TWA 1 ppm (5.2 mg/m3) OEL-DENMARK:STEL 1 ppm (5 mg/m3) OEL-DENMARK:TWA 1 ppm (5 mg/m3) OEL-FINLAND:TWA 1 ppm (5 mg/m3);STEL 3 ppm (15 mg/m3) OEL-FRANCE:TWA 1 ppm (5 mg/m3);STEL 2 ppm (11 mg/m3);Skin OEL-FRANCE:TWA 1 ppm (5 mg/m3);STEL 3 ppm (15 mg/m3);CAR OEL-GERMANY:TWA 1 ppm (5 mg/m3);Carcinogen OEL-HUNGARY:STEL 0.5 mg/m3;Skin OEL-THE NETHERLANDS:TWA 1 ppm (5 mg/m3) OEL-THE PHILIPPINES:TWA 1 ppm (5 mg/m3) OEL-RUSSIA:STEL 0.5 mg/m3 OEL-SWEDEN:TWA 1 ppm (5 mg/m3);STEL 2 ppm (11 mg/m3) OEL-SWEDEN:TWA 1 ppm (5 mg/m3);STEL 2 ppm (11 mg/m3);CAR OEL-SWITZERLAND:TWA 1 ppm (5 mg/m3);STEL 2 ppm (1 mg/m3) OEL-TURKEY:TWA 1 ppm (5 mg/m3) OEL-UNITED KINGDOM:TWA 1 ppm (3 mg/m3);STEL 2 ppm (6 mg/m3) OEL-UNITED KINGDOM:TWA 1 ppm (5 mg/m3) OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

Section 16 - Additional Information

MSDS Creation Date: 4/28/1999
Revision #4 Date: 7/10/2002