Material Safety Data Sheet
Cumene

ACC# 02169

Section 1 - Chemical Product and Company Identification

MSDS Name: Cumene
Catalog Numbers: AC110630000, AC110630010, AC110630025, AC181010000, AC181010010, AC181010025 AC181010025, AC181010050, AC329730000, AC329730050, AC329735000
Synonyms: Isopropylbenzene; Benzene, 1-methylethyl-; Cumol.
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
98-82-8	Cumene	>98	202-704-5

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear, colorless liquid. Flash Point: 31 deg C.
Warning! Flammable liquid and vapor. Causes eye, skin, and respiratory tract irritation. Aspiration hazard if swallowed. Can enter lungs and cause damage. May cause central nervous system depression. May form explosive peroxides. This material has been reported to be susceptible to autoxidation and therefore should be classified as peroxidizable.
Target Organs: Central nervous system, lungs, eyes, skin.

Potential Health Effects

Eye: Causes eye irritation. May cause conjunctivitis.
Skin: Causes skin irritation. Exposure may cause irritation characterized by redness, dryness, and inflammation. Not expected to cause an allergic skin reaction. A single prolonged skin exposure is not likely to result in the material being absorbed in harmful amounts.
Ingestion: Aspiration hazard. Aspiration of material into the lungs may cause chemical pneumonitis, which may be fatal. May be harmful if swallowed. May cause central nervous system depression.
Inhalation: Causes respiratory tract irritation. May cause narcotic effects in high concentration.
Chronic: Prolonged or repeated skin contact may cause dermatitis. Chronic inhalation may cause effects similar to those of acute inhalation. Repeated exposure may cause damage to the spleen. Prolonged exposure can injure liver, kidneys and lungs.

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for a t least 15 minutes. Get medical aid.
Skin: In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.
Ingestion: Potential for aspiration if swallowed. Get medical aid immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, have victim lean forward.
Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Water may be ineffective. Material is lighter than water and a fire may be spread by the use of water. Flammable liquid and vapor. 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. May accumulate static electricity.
Extinguishing Media: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. Water may be ineffective. This material is lighter than water and insoluble in water. The fire could easily be spread by the use of water in an area where the water cannot be contained. For large fires, use water spray, fog or alcohol-resistant foam. Do NOT use straight streams of water.
Flash Point: 31 deg C (87.80 deg F)
Autoignition Temperature: 420 deg C (788.00 deg F)
Explosion Limits, Lower:0.9 vol %
Upper: 6.5 vol %
NFPA Rating: (estimated) Health: 2; Flammability: 3; 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. A vapor suppressing foam may be used to reduce vapors.

Section 7 - Handling and Storage

Handling: Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. 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, sparks and flame. Avoid breathing vapor or mist.
Storage: Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Containers should be dated when opened and tested periodically for the presence of peroxides. Should crystals form in a peroxidizable liquid, peroxidation may have occurred and the product should be considered extremely dangerous. In this instance, the container should only be opened remotely by professionals. Isolate from oxidizing materials and acids. All peroxidizable substances should be stored away from heat and light and be protected from ignition sources.

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 explosion-proof ventilation to keep airborne levels to acceptable levels.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Cumene	50 ppm TWA	50 ppm TWA; 245 mg/m3 TWA 900 ppm IDLH	50 ppm TWA; 245 mg/m3 TWA

OSHA Vacated PELs: Cumene: 50 ppm TWA; 245 mg/m3 TWA
Personal Protective Equipment
Eyes: Wear chemical splash goggles.
Skin: Use polyvinyl alcohol or fluorocarbon rubber (viton) gloves.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance: clear, colorless
Odor: Sharp aromatic odor
pH: Not available.
Vapor Pressure: 8 mm Hg @ 20 deg C
Vapor Density: 4.1 (Air=1)
Evaporation Rate: Not available.
Viscosity: 0.79 mPas 20 deg C
Boiling Point: 152 - 154 deg C @ 760 mm Hg
Freezing/Melting Point:-96 deg C
Decomposition Temperature: Not available.
Solubility: Insoluble.
Specific Gravity/Density:.8600g/cm3
Molecular Formula:C9H12
Molecular Weight:120.19

Section 10 - Stability and Reactivity

Chemical Stability: Under normal storage conditions, peroxidizable compounds can form and accumulate peroxides which may explode when subjected to heat or shock. This material is most hazardous when peroxide levels are concentrated by distillation or evaporation.
Conditions to Avoid: Ignition sources, excess heat, prolonged exposure to air.
Incompatibilities with Other Materials: Oxidizing agents, nitric acid, nitrites, sulfuric acid, chlorosulfonic acid, oleum.
Hazardous Decomposition Products: Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.
Hazardous Polymerization: Has not been reported

Section 11 - Toxicological Information

RTECS#:
CAS# 98-82-8: GR8575000
LD50/LC50:
CAS# 98-82-8:
Draize test, rabbit, eye: 86 mg Mild;
Draize test, rabbit, eye: 500 mg/24H Mild;
Draize test, rabbit, skin: 100 mg/24H Moderate;
Inhalation, mouse: LC50 = 10 gm/m3/7H;
Inhalation, mouse: LC50 = 15300 mg/m3/2H;

Inhalation, mouse: LC50 = 10000 mg/m3/7H;
Inhalation, rat: LC50 = 39000 mg/m3/4H;
Oral, mouse: LD50 = 12750 mg/kg;
Oral, rat: LD50 = 1400 mg/kg;
Oral, rat: LD50 = 2.9 gm/kg;
Skin, rabbit: LD50 = 12300 uL/kg;
.

Carcinogenicity:
CAS# 98-82-8: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found
Teratogenicity: No information found
Reproductive Effects: No information found
Mutagenicity: No information found
Neurotoxicity: Cumene is a nervous system depressant, producing behavioral changes at low doses and ataxia (failure of muscular coordination), narcosis, unconsciousness, and respiratory depression at high doses.
Other Studies:

Section 12 - Ecological Information

Ecotoxicity: Water flea Daphnia: EC50 =0.6 mg/L; 48Hr; UnspecifiedBacteria: Phytobacterium phosphoreum: EC50 = 1.48 mg/L; 5,15,30 min; Microtox testFish: Fathead Minnow: LC50 = 6.32 mg/L; 96 Hr; Flow-through at 24.5 C (pH 7.58) When released to soil, cumene is expected to biodegrade and may volatilize from the soil surface. Cumene is expected to strongly adsorb to soils and is not expected to leach to groundwater. When released to water, cumene is expected to volatilize with an estimated half-life of 5-14 days and to biodegrade rapidly. Compared to these processes, aqueous photooxidation by hydroxyl radicals (estimated half-life 0.7 years) and peroxy radicals (estimated half-life 2.2 years) are expected to be relatively slow, and so are not expected to be significant fate processes.
Environmental: Bioconcentration is not expected to be significant. When released to the atmosphere, vapor phase cumene will react with photochemically generated hydroxyl radicals with an estimated half-life of 25 hours in polluted atmospheres and 49 hours in normal atmospheres. The reaction of vapor phase cumene with ozone has an estimated half-life of 3 years and the half-life of direct photolysis was estimated to be 1500 years.
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: None listed.
RCRA U-Series:
CAS# 98-82-8: waste number U055 (Ignitable waste).

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	ISOPROPYLBENZENE	ISOPROPYLBENZENE
Hazard Class:	3	3
UN Number:	UN1918	UN1918
Packing Group:	III	III
Additional Info:		FLASHPOINT 31 C

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 98-82-8 is listed on the TSCA inventory.
Health & Safety Reporting List
CAS# 98-82-8: Effective 12/28/84, Sunset 12/28/94
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.
CERCLA Hazardous Substances and corresponding RQs
CAS# 98-82-8: 5000 lb final RQ; 2270 kg final RQ
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
SARA Codes
CAS # 98-82-8: immediate, fire, reactive.
Section 313
This material contains Cumene (CAS# 98-82-8, >98%),which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.
Clean Air Act:
CAS# 98-82-8 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:

None of the chemicals in this product are listed as Hazardous Substances 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# 98-82-8 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

XN N

Risk Phrases:

R 10 Flammable.
R 37 Irritating to respiratory system.
R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R 65 Harmful: may cause lung damage if swallowed.

Safety Phrases:

S 24 Avoid contact with skin.
S 37 Wear suitable gloves.
S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.
S 62 If swallowed, do not induce vomiting: seek medical advice immed iately and show this container or label.

WGK (Water Danger/Protection)

CAS# 98-82-8: 1

Canada - DSL/NDSL

CAS# 98-82-8 is listed on Canada's DSL List.

Canada - WHMIS

WHMIS: Not available.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 98-82-8 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 1/31/2000
Revision #8 Date: 1/27/2004