Material Safety Data Sheet
Hexachlorocyclopentadiene

ACC# 73038

Section 1 - Chemical Product and Company Identification

MSDS Name: Hexachlorocyclopentadiene
Catalog Numbers: AC120440000, AC120440010, AC120442500
Synonyms: 1,2,3,4,5,5-Hexachloro-1,3-cyclopentadiene; Perchlorocyclopentadiene.
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
77-47-4	Hexachlorocyclopentadiene	98+	201-029-3

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear yellow liquid.
Danger! Toxic if absorbed through the skin. May be fatal if inhaled. Causes burns by all exposure routes. Harmful if swallowed. Lachrymator (substance which increases the flow of tears). Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. May cause allergic skin reaction. May cause central nervous system effects. May cause liver and kidney damage.
Target Organs: Blood, kidneys, central nervous system, liver, spleen, respiratory system, gastrointestinal system, eyes, skin.

Potential Health Effects

Eye: Causes eye burns. Lachrymator (substance which increases the flow of tears).
Skin: Causes skin burns. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. Toxic in contact with skin.
Ingestion: Harmful if swallowed. Causes gastrointestinal tract burns. May cause liver and kidney damage.
Inhalation: May be fatal if inhaled. Causes chemical burns to the respiratory tract. May cause central nervous system effects.
Chronic: Repeated exposure may cause damage to the spleen. Adverse reproductive effects have been reported in animals. Laboratory experiments have resulted in mutagenic effects. Chronic exposure may cause blood effects. Repeated or prolonged exposure may cause allergic reactions in sensitive individuals.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid imme diately.

Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Ingestion: Do not induce vomiting. Get medical aid immediately. Call a poison control center.
Inhalation: Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. SPEED IS ESSENTIAL, OBTAIN MEDICAL AID IMMEDIATELY. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
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. Substance may react with water, and may release corrosive and/or toxic gases.
Extinguishing Media: Do NOT use water directly on fire. Use foam, dry chemical, or carbon dioxide.
Flash Point: 109 deg C (228.20 deg F)
Autoignition Temperature: Not applicable.
Explosion Limits, Lower: Not available.
Upper: Not available.
NFPA Rating: (estimated) Health: 4; Flammability: 1; 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. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Provide ventilation. Do not expose spill to water. Do not get water inside containers. Evacuate unnecessary personnel. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

Handling: Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Do not allow contact with water. Container should be opened by a technically qualified person. Use only in a chemical fume hood. Keep from contact with moist air and steam.
Storage: Store in a cool, dry place. Store in a tightly closed container. Corrosives area. Store protected from moisture. Store protected from light.

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 only under a chemical fume hood.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Hexachlorocyclopentadiene	0.01 ppm TWA	0.01 ppm TWA; 0.1 mg/m3 TWA	none listed

OSHA Vacated PELs: Hexachlorocyclopentadiene: 0.01 ppm TWA; 0.1 mg/m3 TWA
Personal Protective Equipment
Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin: Wear appropriate protective gloves to prevent skin exposure.
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 yellow
Odor: Pungent odor.
pH: Not available.
Vapor Pressure: 0.1 mbar @ 20 deg C
Vapor Density: 9.42 (air=1)
Evaporation Rate: Not available.
Viscosity: 5.6 cPs 30 deg C
Boiling Point: 239 deg C @ 753.00 mmHg
Freezing/Melting Point:-10 deg C
Decomposition Temperature: Not available.
Solubility: Insoluble.
Specific Gravity/Density:1.702
Molecular Formula:C5Cl6
Molecular Weight:272.76

Section 10 - Stability and Reactivity

Chemical Stability: May decompose on exposure to moist air or water. Light sensitive.
Conditions to Avoid: Incompatible materials, light, excess heat, exposure to moist air or water.

Incompatibilities with Other Materials: Strong oxidizing agents.
Hazardous Decomposition Products: Hydrogen chloride, carbon monoxide, carbon dioxide, hydrogen gas.
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:
CAS# 77-47-4: GY1225000
LD50/LC50:
CAS# 77-47-4:
Draize test, rabbit, eye: 20 mg/24H Moderate;
Draize test, rabbit, eye: 100 mg/5M Severe;
Draize test, rabbit, skin: 500 mg/4H Severe;
Draize test, rabbit, skin: 500 uL/24H Severe;
Inhalation, rat: LC50 = 1600 ppb/4H;
Inhalation, rat: LC50 = 23 mg/m3/2H;
Oral, mouse: LD50 = 505 mg/kg;
Oral, rat: LD50 = 200 mg/kg;

Skin, rabbit: LD50 = 430 mg/kg;
.

Carcinogenicity:
CAS# 77-47-4: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found
Teratogenicity: No information found
Reproductive Effects: Adverse reproductive effects have occurred in experimental animals.
Mutagenicity: Mutagenic effects have occurred in experimental animals.
Neurotoxicity: No information found
Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. LC50(fathead minnows, early juvenile):6.7 鎔/L/30 days LC50 (fathead minnows, larval):7 鎔/L/96H Water danger/protection: WGK=2
Environmental: No information available.
Physical: No information available.
Other: Do not empty into drains.

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# 77-47-4: waste number U130.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	HEXACHLOROCYCLOPENTADIENE	HEXACHLOROCYCLOPENTADIENE
Hazard Class:	6.1	6.1
UN Number:	UN2646	UN2646
Packing Group:	I	I

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 77-47-4 is listed on the TSCA inventory.
Health & Safety Reporting List
CAS# 77-47-4: Effective 10/4/82, Sunset 10/4/92
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# 77-47-4: 10 lb final RQ; 4.54 kg final RQ

SARA Section 302 Extremely Hazardous Substances

CAS# 77-47-4: 100 lb TPQ

Section 313

This material contains Hexachlorocyclopentadiene (CAS# 77-47-4, 98+%),which is subject to the reporting requirements of Section 313 of SARA Title III and 40

Clean Air Act:

CAS# 77-47-4 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# 77-47-4 is listed as a Hazardous Substance under the CWA. CAS# 77-47-4 is listed as a Priority Pollutant under the Clean Water Act. CAS# 77-47-4 is listed as a Toxic Pollutant under the Clean Water Act.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 77-47-4 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:

T+ N

Risk Phrases:

R 22 Harmful if swallowed.
R 24 Toxic in contact with skin.
R 26 Very toxic by inhalation.
R 34 Causes burns.
R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S 25 Avoid contact with eyes.
S 39 Wear eye/face protection.
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.
S 60 This material and its container must be disposed of as hazardou s waste.
S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.

WGK (Water Danger/Protection)

CAS# 77-47-4: 3

Canada - DSL/NDSL

CAS# 77-47-4 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of D1A, D2B, E.
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# 77-47-4 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 9/02/1997
Revision #7 Date: 5/22/2008

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.