Material Safety Data Sheet
Chlorazol Black E, certfied

ACC# 17200

Section 1 - Chemical Product and Company Identification

MSDS Name: Chlorazol Black E, certfied
Catalog Numbers: AC404400000, AC404400250
Synonyms: Atlantic Black SD; 2,7-Naphthalenedisulfonic acid,
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
1937-37-7	C.I. Direct Black 38	100	217-710-3

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: black crystalline powder.
Warning! Causes eye irritation. May cause skin and respiratory tract irritation. May cause cancer in humans. Possible risk of harm to the unborn child.
Target Organs: Bladder.

Potential Health Effects
Eye: Causes eye irritation.
Skin: May cause skin irritation.
Ingestion: May cause irritation of the digestive tract.
Inhalation: May cause respiratory tract irritation.
Chronic: This product is a chemical derivative of benzidine, a known human carcinogen. This substance has caused adverse reproductive and fetal effects in laboratory animals. The primary target organs for carcinogenicity induced by benzidine vary with species. Rats, mice, and hamsters develop liver and mammary tumors. Dogs and humans develop increased incidences of urinary bladder cancer.

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: If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.
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.
Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or appropriate foam.
Flash Point: Not applicable.
Autoignition Temperature: Not available.
Explosion Limits, Lower: Not available.
Upper: Not available.
NFPA Rating: (estimated) Health: 2; Flammability: 1; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.
Storage: Keep container closed when not in use. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

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 ventilation to keep airborne concentrations low.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
C.I. Direct Black 38	none listed	none listed	none listed

OSHA Vacated PELs: C.I. Direct Black 38: No OSHA Vacated PELs are listed for this chemical.
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: Crystalline powder
Appearance: black
Odor: Not available.
pH: Not available.
Vapor Pressure: Not available.
Vapor Density: Not available.
Evaporation Rate: Not available.
Viscosity: Not available.
Boiling Point: Not available.
Freezing/Melting Point: Not available.
Decomposition Temperature: Not available.
Solubility: Soluble.
Specific Gravity/Density: Not available.
Molecular Formula:C34H25N9Na2O7S2
Molecular Weight:781.73

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Dust generation.
Incompatibilities with Other Materials: Strong oxidizing agents.
Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, oxides of sulfur, carbon dioxide.
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:
CAS# 1937-37-7: QJ6160000
LD50/LC50:
CAS# 1937-37-7:
Draize test, rabbit, eye: 100 mg Moderate;
Oral, rat: LD50 = 7600 mg/kg;
.
Dermal LD50 (rabbits): > 8000 mg/kg.
Carcinogenicity:
CAS# 1937-37-7:

- **ACGIH:** Not listed.
- **California:** carcinogen, initial date 1/1/88
- **NTP:** Known carcinogen
- **IARC:** Group 2A carcinogen (listed as Benzidine based dyes).

Epidemiology: A strong association relating human exposure to benzidine based dyes with the subsequent development of bladder tumors was presented after a case-control mortality study of 200 bladder cancer patients in Japan. Patients were mostly kimono painters/dyers

Teratogenicity: C.I. Direct Black 38, a benzidine-based dye, was evaluated for developmental toxicity. All dose levels caused a significant increase in the average % of malformed fetuses. Malformed centra were significantly increased at 200 mg/kg/day and above.
Reproductive Effects: In 1 study, the administration of benzidine to pregnant mice produced liver tumors in the offspring. Oral doses of benzidine-based dyes to pregnant mice on Day 8-12 of gestation altered testicular development & caused hypospermatogenesis during adulthoodIn mice and rats, prenatal exposure to the dye Congo red, a benzidine-based dye, permanently reduces the number of germ cells in male and female offspring.
Mutagenicity: See actual entry in RTECS for complete information.
Neurotoxicity: No information found
Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. AQUATIC FATE: Based on a recommended classification scheme, an estimated Koc value of 300, determined from an estimated log Kow of 2.0 and a recommended regression-derived equation, indicates that C.I. Direct Black 38 is not expected to adsorb to suspended solids and sediment in the water.
Environmental: C.I. Direct Black 38 was found to biodegrade in a soil with the formation of benzidine products, although no data on the rate of biodegradation is provided. These results indicate that complete mineralization of the dye is a slow process, although the rate of the process leading to cleavage of the azo group producing benzidine products may be faster. C.I. Direct Black 38 may be readily biodegraded anaerobically as a wide variety of anaerobic bacteria have the ability to cleave the azo linkage to produce aromatic amines.
Physical: ATMOSPHERIC FATE: The ionic state of C.I. Direct Black 38 makes this compound essentially nonvolatile; therefore this compound should exist solely in the particulate phase in the ambient atmosphere. Particulate-phase C.I. Direct Black 38 may be physically removed from the air by wet and dry deposition.
Other: An estimated BCF value of 20 was calculated for C.I. Direct Black 38, using an estimated log Kow of 2 and a recommended regression-derived equation. According to a recommended classification scheme, this BCF value suggests that bioconcentration of C.I. Direct Black 38 in aquatic organisms will not be an important fate process.

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: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	Not regulated as a hazardous material	No information available.
Hazard Class:		
UN Number:		
Packing Group:		

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 1937-37-7 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
CAS# 1937-37-7: Section 5
TSCA Significant New Use Rule
CAS# 1937-37-7: This product is for research and development use only. It is subject to a SNUR which has specific requirements and restrictions. The specific citation for this product is 40CFR citation 721.1660.
CERCLA Hazardous Substances and corresponding RQs
None of the chemicals in this material have an RQ.
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
SARA Codes
CAS # 1937-37-7: immediate, delayed.
Section 313
This material contains C.I. Direct Black 38 (CAS# 1937-37-7, 100%),which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.
Clean Air Act:
This material does not contain any hazardous air pollutants.
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# 1937-37-7 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

The following statement(s) is(are) made in order to comply with the California Safe Drinking Water Act:

WARNING: This product contains C.I. Direct Black 38, a chemical known to the state of California to cause cancer.

California No Significant Risk Level: CAS# 1937-37-7: 0.09 æg/day NSRL

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

T

Risk Phrases:

R 45 May cause cancer.

R 63 Possible risk of harm to the unborn child.

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# 1937-37-7: No information available.

Canada - DSL/NDSL

CAS# 1937-37-7 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of D2A, D2B.

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# 1937-37-7 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 4/05/1997

Revision #9 Date: 3/22/2006