

Material Safety Data Sheet

3,5-Dibromo-4-hydroxybenzonitrile, 98%

ACC# 31341

Section 1 - Chemical Product and Company Identification

MSDS Name: 3,5-Dibromo-4-hydroxybenzonitrile, 98%

Catalog Numbers: AC214350100

Synonyms: Bromoxynil; 3,5-Dibromo-4-hydroxyphenylcyanide; 4-Hydroxy-3,5-dibromobenzonitrile.

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
1689-84-5	3,5-Dibromo-4-hydroxybenzonitrile	98	216-882-7

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: off-white powder.

Danger! May be fatal if inhaled. Harmful if swallowed. Causes eye and skin irritation. May cause allergic skin reaction. Possible risk of harm to the unborn child. This product contains 3,5-dibromo-4-hydroxybenzonitrile, a chemical known to the state of California to cause birth defects or other reproductive harm.

Target Organs: Eyes, reproductive system, skin.

Potential Health Effects

Eye: Causes eye irritation.

Skin: Causes skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.

Ingestion: Harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

Inhalation: May be fatal if inhaled. May cause respiratory tract irritation.

Chronic: Possible risk of harm to the unborn child. Chronic exposure may lead to weight loss, fever, emesis, and myalgia.

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.

Skin: In case of contact, immediately flush skin with soap and plenty of water. Remove contaminated clothing and shoes. Get medical aid if symptoms occur. 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: 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. 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 applicable.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 3; 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. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale. Use only with adequate ventilation or respiratory protection.

Storage: Keep containers tightly closed. Store in a cool, dry 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
3,5-Dibromo-4-hydroxybenzonitrile	none listed	none listed	none listed

OSHA Vacated PELs: 3,5-Dibromo-4-hydroxybenzonitrile: 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: Powder

Appearance: off-white

Odor: no odor

pH: Not available.

Vapor Pressure: < 1 mPa @ 20 deg C

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: 188-192 deg C

Decomposition Temperature: Not available.

Solubility: 0.13 g/L @ 25 °C

Specific Gravity/Density: Not available.

Molecular Formula: C₇H₃Br₂NO

Molecular Weight: 276.90

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Dust generation, confined spaces.

Incompatibilities with Other Materials: Strong oxidizing agents, strong bases.

Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, carbon dioxide, cyanide fumes, hydrogen bromide, bromine fumes.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 1689-84-5: DI3150000

LD50/LC50:

CAS# 1689-84-5:

Inhalation, rat: LC50 = 296000 mg/m³;

Oral, mouse: LD50 = 110 mg/kg;

Oral, rabbit: LD50 = 260 mg/kg;

Oral, rat: LD50 = 190 mg/kg;

Skin, rabbit: LD50 = 3660 mg/kg;

Skin, rat: LD50 = >2 mg/kg;

Carcinogenicity:

CAS# 1689-84-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found

Teratogenicity: See actual entry in RTECS for complete information.

Reproductive Effects: No information found

Mutagenicity: No information found

Neurotoxicity: No information found

Other Studies:

Section 12 - Ecological Information

Ecotoxicity: Fish: Fathead Minnow: LC50: 11.5 mg/L; 96 H; Flow-through bioassay w/measured conc. Fish: Fathead Minnow: EC50: 11.5 mg/L; 96 H; Flow-through bioassay w/measured conc. Fish: Fathead Minnow: LC50: 13.8 mg/L; 96 H; Flow-through bioassay w/measured conc. Fish: Fathead Minnow: EC50: 13.8 mg/L; 96 H; Flow-through bioassay w/measured conc. Fish: Channel catfish: LC50: 0.023 ppm; ; not specified No data available.

Environmental: Will photolyze on the surface of soil and biodegrade. Should adsorb moderately to soil at low pHs. Will have moderate mobility in soil. Volatilization from dry and moist soil will be minimal. If released to water, will partially dissociate at neutral or basic pHs. Will adsorb moderately to sediment and particulates at acid pHs. Will photolyze in surface water and biodegrade. Not expected to bioconcentrate in aquatic organisms. Due to low vapor pressure, should not occur as a vapor in the atmosphere and will gravitationally settle from the air.

Physical: Biodegradation by microorganisms, half-life in soil: 7 days.

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: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	DOT regulated - small quantity provisions apply (see 49CFR173.4)	Nitriles, Toxic, Solid, N.O.S.
Hazard Class:		6.1
UN Number:		UN3439
Packing Group:		II

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 1689-84-5 is not listed on the TSCA inventory. It is for research and development use only.

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.

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.

Section 313

This material contains 3,5-Dibromo-4-hydroxybenzonitr (CAS# 1689-84-5, 98%), which is subject to the reporting requirements of Section 313 of SARA Title

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

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# 1689-84-5 can be found on the following state right to know lists: California.

California Prop 65

WARNING: This product contains 3,5-Dibromo-4-hydroxybenzonitr, a chemical known to the state of California to cause developmental reproductive toxicity.

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 25 Toxic if swallowed.
R 26 Very toxic by inhalation.
R 43 May cause sensitization by skin contact.
R 63 Possible risk of harm to the unborn child.
R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S 27 Take off immediately all contaminated clothing.
S 36/37 Wear suitable protective clothing and gloves.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S 60 This material and its container must be disposed of as hazardous waste.
S 28A After contact with skin, wash immediately with plenty of water.
S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.
S 63 In case of accident by inhalation: remove casualty to fresh air and keep at rest.

WGK (Water Danger/Protection)

CAS# 1689-84-5: No information available.

Canada - DSL/NDSL

None of the chemicals in this product are listed on the DSL or NDSL list.

Canada - WHMIS

This product has a WHMIS classification of D1A, D2B, D2A.

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

Section 16 - Additional Information
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MSDS Creation Date: 7/26/1999

Revision #5 Date: 10/03/2005

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.