

Material Safety Data Sheet

2-Nitroanisole

ACC# 77548

Section 1 - Chemical Product and Company Identification

MSDS Name: 2-Nitroanisole

Catalog Numbers: AC146430000, AC146430010, AC216960000, AC216960050, AC216961000

Synonyms: 1-Methoxy-2-nitrobenzene; 2-Methoxynitrobenzene; ortho-Nitrobenzene methyl ether; 2-Nitromethoxybenzene; o-Nitrophenyl methyl ether.

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
91-23-6	2-Nitroanisole	99	202-052-1

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear brown yellow liquid.

Caution! May cause eye, skin, and respiratory tract irritation. May be harmful if swallowed. May cause cancer based on animal studies. May cause methemoglobinemia.

Target Organs: Blood.

Potential Health Effects

Eye: May cause eye irritation.

Skin: May cause skin irritation. No skin absorption data found. No data found on whether or not this chemical would be likely to cause an allergic skin reaction.

Ingestion: May cause irritation of the digestive tract. Methemoglobinemia is characterized by dizziness, drowsiness, headache, shortness of breath, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), rapid heart rate and chocolate-brown colored blood. May be harmful if swallowed. Overexposure may cause methemoglobinemia.

Inhalation: Effects may be delayed. May cause respiratory tract irritation.

Chronic: Possible cancer hazard based on tests with laboratory animals. 2-Nitroanisole was tested for carcinogenicity by oral administration in one study in mice and in two studies in rats. In mice, the incidence of hepatocellular adenomas was increased in males and females, and that of hepatoblastomas was increased in males. In one study in rats, the incidence of mononuclear cell leukemia was increased in males and females. In the second study, which used a shorter duration of treatment but higher doses, increases were seen in the incidences of tumors of the urinary bladder, the large intestine and the kidney.

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 immediately.

Skin: Get medical aid immediately. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician: For methemoglobinemia, administer oxygen alone or with Methylene Blue depending on the methemoglobin concentration in the blood.

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.

Extinguishing Media: For large fires, use water spray, fog, or alcohol-resistant foam. For small fires, use dry chemical, carbon dioxide, halon, or water spray.

Flash Point: 142 deg C (287.60 deg F)

Autoignition Temperature: 464 deg C (867.20 deg F)

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 1; Flammability: 1; Instability: 0

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. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

Storage: 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
2-Nitroanisole	none listed	none listed	none listed
Nitro-methoxybenzene	none listed	none listed	none listed

OSHA Vacated PELs: 2-Nitroanisole: No OSHA Vacated PELs are listed for this chemical. Nitro-methoxybenzene: 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: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: clear brown yellow

Odor: Not available.

pH: Not available.

Vapor Pressure: 0.0036 mm Hg @ 25 deg C

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: 273 deg C

Freezing/Melting Point: 9.4 deg C

Decomposition Temperature: Not available.

Solubility: Insoluble.

Specific Gravity/Density: 1.2500 g/cm³

Molecular Formula: C₇H₇NO₃

Molecular Weight: 153.14

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Excess heat.

Incompatibilities with Other Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, carbon dioxide.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 91-23-6: BZ8790000

CAS# 29191-53-5 unlisted.

LD50/LC50:

CAS# 91-23-6:

Oral, mouse: LD50 = 1300 mg/kg;

Oral, mouse: LD50 = 1300 mg/kg;

Oral, rat: LD50 = 740 mg/kg;

Oral, rat: LD50 = 760 mg/kg;

CAS# 29191-53-5:

Carcinogenicity:

CAS# 91-23-6:

- **ACGIH:** Not listed.
- **California:** carcinogen, initial date 10/1/92
- **NTP:** Suspect carcinogen
- **IARC:** Group 2B carcinogen

CAS# 29191-53-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No data available.**Teratogenicity:** No data available.**Reproductive Effects:** No data available.**Mutagenicity:** See actual entry in RTECS for complete information.**Neurotoxicity:** No data available.**Other Studies:****Section 12 - Ecological Information**

Ecotoxicity: No data available. Water danger/protection: WGK2 Invertebrate toxicity: EC50 (24 hr) Daphnia magna 13 mg/l (nominal value) [Kuehn, R. et al Water Res. 1989, 23(4), 501-510]

Environmental: Bioaccumulation: Non- or low accumulative.**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:** None listed.**Section 14 - Transport Information**

	US DOT	Canada TDG
Shipping Name:	NITROANISOLE	NITROANISOLES, LIQUID
Hazard Class:	6.1	6.1
UN Number:	UN2730	UN2730
Packing Group:	III	III

Section 15 - Regulatory Information**US FEDERAL****TSCA**

CAS# 91-23-6 is listed on the TSCA inventory.

CAS# 29191-53-5 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 No chemicals are reportable under Section 313.**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# 91-23-6 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 29191-53-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

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 2-Nitroanisole, a chemical known to the state of California to cause cancer.

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

Risk Phrases:

R 22 Harmful if swallowed.

R 45 May cause cancer.

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# 91-23-6: 3

CAS# 29191-53-5: No information available.

Canada - DSL/NDSL

CAS# 91-23-6 is listed on Canada's NDSL List.

Canada - WHMIS

This product has a WHMIS classification of 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

CAS# 91-23-6 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 8/21/1998**Revision #4 Date:** 12/06/2004

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.