Potential Health Effects

Eye:

```
**** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ****
MSDS Name: o-Anisidine, 99+%
Catalog Numbers:
   AC104810000, AC104810010, AC104810050, AC104811000, AC104812500,
AC10481500
   AC104815000, AC4734308
Synonyms:
    2-Methoxyaniline
Company Identification (Europe): Acros Organics N.V.
                           Janssen Pharmaceuticalaan 3a
                            2440 Geel, Belgium
Company Identification (USA):
                           Acros Organics
                           One Reagent Lane
                           Fairlawn, NJ 07410
For information in North America, call: 800-ACROS-01
For information in Europe, call:
                                  0032(0) 14575211
For emergencies in the US, call CHEMTREC: 800-424-9300
For emergencies in Europe, call: 0032(0) 14575299
       **** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****
+-----
+----+
| CAS#
                       Chemical Name
EINECS# |
.
     90-04-0 | o-Anisidine
                                              99.0+ | 201-
+-----
+----+
        Hazard Symbols: T+ N
       Risk Phrases: 26/27/28 33 45 51/53
              **** SECTION 3 - HAZARDS IDENTIFICATION ****
                         EMERGENCY OVERVIEW
Appearance: Not available.
Warning! Causes eye irritation. Cancer suspect agent. May cause
liver and kidney damage. May cause cancer based on animal studies.
May cause blood abnormalities. May cause sensitization by inhalation
and by skin contact.
Target Organs: Blood, kidneys, liver, none.
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Causes severe eye irritation.

Skin:

May be absorbed through the skin in harmful amounts. May cause skin

sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. If absorbed, may cause symptoms similar to those for ingestion.

Ingestion:

May cause irritation of the digestive tract. May cause kidney damage. May cause methemoglobinemia, cyanosis, convulsions, and death. Methemoglobinemia is characterized by dizziness,

drowsiness,

headache, breath shortness, cyanosis with bluish skin, rapid heart

rate and chocolate-brown colored blood.

Inhalation:

May cause severe allergic respiratory reaction. May cause respiratory tract irritation.

Chronic:

May cause cancer according to animal studies.

**** SECTION 4 - FIRST AID MEASURES ****

Eyes:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Immediately flush

eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin:

Flush skin with plenty of soap and water for at least 15 minutes

while removing contaminated clothing and shoes. Get medical aid if

symptoms occur.

Ingestion:

If victim is conscious and alert, give 2-4 cupfuls of milk or water.

Get medical aid immediately. Do NOT induce vomiting. If conscious and

alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Inhalation:

Get medical aid immediately. Remove from exposure to fresh air immediately. If breathing is difficult, give oxygen.

Notes to Physician:

Treat symptomatically.

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:

In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam.

**** 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., dry sand or earth),

place into a chemical waste container.

**** SECTION 7 - HANDLING and STORAGE ****

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in a well ventilated area. Do not get on

skin or in eyes. Do not ingest or inhale.

Storage:

Store in a cool, dry place. Store in a tightly closed container.

**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****

Engineering Controls:

Use adequate ventilation to keep airborne concentrations low.

Use

then

adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

	Exposure Limits		
+	-+	-+	_
++ Chemical Name Final PELs	ACGIH	NIOSH	OSHA -
	-	-	-
 o-Anisidine	0.1 ppm; skin -	10 5 mg/m3 TWD.	0.5 mg/m3
TWA	10.1 ppm, skin	10.5 mg/m3 1WA,	10.5 mg/m5
	potential for	NIOSH Potential	(listed
under **			
	cutaneous	Occupational	no name
**).			

|absorption | Carcinogen-see | Appendix A | Potential NIOSH | carcinogen. ______ +----+ OSHA Vacated PELs: o-Anisidine: 0.5 mg/m3 TWA (listed under ** no name **) Personal Protective Equipment Eyes: Wear safety glasses and chemical goggles if splashing is possible. 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 and clothing to prevent skin exposure. Wear appropriate gloves to prevent skin exposure. Clothing: Wear appropriate protective clothing to minimize contact with skin. Respirators: Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions. Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary. **** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES **** Physical State: Not available. Appearance: Not available.

None reported.

Not available.

0.03 hPa @ 20 C

Odor:

Vapor Pressure:

:Hq

```
Vapor Density:
                           Not available.
Evaporation Rate:
                           Not available.
Viscosity:
                            Not available.
Boiling Point:
                             225 deg C @ 760.00mm Hg
                             5.0 - 6.0 deg C
Freezing/Melting Point:
Autoignition Temperature:
                           437 deg C ( 818.60 deg F)
Flash Point:
                             107 deg C ( 224.60 deg F)
NFPA Rating:
                             health-2; flammability-1; reactivity-0
Explosion Limits, Lower:
                            Not available.
                          Not available.
                 Upper:
Decomposition Temperature: >300 deg C
Solubility:
                            14 \text{ g/l} (20 \text{ c})
Specific Gravity/Density: 1.0920g/cm3
Molecular Formula:
                            C7H9NO
Molecular Weight:
                             123.15
                **** SECTION 10 - STABILITY AND REACTIVITY ****
    Chemical Stability:
         Stable under normal temperatures and pressures.
    Conditions to Avoid:
         None reported.
    Incompatibilities with Other Materials:
         Strong oxidizing agents.
    Hazardous Decomposition Products:
         Nitrogen oxides, carbon monoxide, carbon dioxide, nitrogen.
    Hazardous Polymerization: Has not been reported.
               **** SECTION 11 - TOXICOLOGICAL INFORMATION ****
    RTECS#:
         CAS# 90-04-0: BZ5410000
    LD50/LC50:
         CAS# 90-04-0: Oral, mouse: LD50 = 1400 mg/kg; Oral, rabbit: LD50
          870 mg/kg; Oral, rat: LD50 = 2 \text{ gm/kg}.
     Carcinogenicity:
      o-Anisidine -
              ACGIH: A3 - Animal Carcinogen
         California: carcinogen; initial date 7/1/87
              NIOSH: occupational carcinogen (Listed under 'Anisidine
(o-, p- i
               OSHA: Possible Select carcinogen
               IARC: Group 2B carcinogen
    Epidemiology:
         No data available.
    Teratogenicity:
         No data available.
    Reproductive Effects:
         No data available.
```

Neurotoxicity:

No data available.

Mutagenicity:

No data available.

Other Studies:

Studies of groups of five male rats were administered 1-12 doses of

chemical by gavage at 1,000, 500, 100 or 10 mg/kg over 1-16

days.

Ingestion of high doses caused prostration, rapid breathing, and

pale

and swollen kidneys. Lethality occurred in one animal at the 500 mg/kg dose level after 2 doses.

**** SECTION 12 - ECOLOGICAL INFORMATION ****

**** SECTION 13 - DISPOSAL CONSIDERATIONS ****

Chemical waste generators must determine whether a discarded chemical is classif

as a hazardous waste.

US EPA guidelines for the classification determination are listed in 40 CFR Part

Additionally, waste generators must consult state and local hazardous waste regu

ensure complete and accurate classification.

RCRA P-Series: None listed. RCRA U-Series: None listed.

**** SECTION 14 - TRANSPORT INFORMATION ****

US DOT

Shipping Name: ANISIDINES

Hazard Class: 6.1

UN Number: UN2431
Packing Group: III

Canadian TDG

Shipping Name: ANISIDINES, LIQUID

Hazard Class: 6.1 UN Number: UN2431

**** SECTION 15 - REGULATORY INFORMATION ****

US FEDERAL

TSCA

CAS# 90-04-0 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

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.

SARA

Section 302 (RQ)

None of the chemicals in this material have an RQ.

Section 302 (TPQ)

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 90-04-0: acute, chronic.

Section 313

This material contains o-Anisidine (CAS# 90-04-0, 99 0%), which

is

subject to the reporting requirements of Section 313 of SARA

Title

III and 40 CFR Part 372.

Clean Air Act:

CAS# 90-04-0 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

o-Anisidine can be found on the following state right to know lists: California, New Jersey, Florida, (listed as ** no name **),

Pennsylvania, Minnesota, Massachusetts.

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

WARNING: This product contains o-Anisidine, a chemical known to the state of California to cause cancer.

California No Significant Risk Level:

CAS# 90-04-0: no significant risk level = 5 ug/day

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: T+ N Risk Phrases: R 26/27/28 Very toxic by inhalation, in contact with skin and if swallowed. R 33 Danger of cumulative effects. R 45 May cause cancer. R 51/53 Toxic to aquatic organisms; may cause long-term adverse effects in the aquatic environment. Safety Phrases: S 53 Avoid exposure - obtain special instructions before use. S 28B After contact with skin, wash immediately with plenty of water and soap. S 36/37 Wear suitable protective clothing and aloves. S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S 61 Avoid release to the environment. Refer to special instructions/Safety data sheets. WGK (Water Danger/Protection) CAS# 90-04-0: 3 United Kingdom Occupational Exposure Limits Canada CAS# 90-04-0 is listed on Canada's DSL/NDSL List. This product does not have a WHMIS classification. CAS# 90-04-0 is not listed on Canada's Ingredient Disclosure List. Exposure Limits CAS# 90-04-0: OEL-AUSTRALIA:TWA 0.1 ppm (0.5 mg/m3);Skin OEL-AUSTRIA:TWA 0.1 ppm (0.5 mg/m3);Skin OEL-BELGIUM: TWA 0.1 ppm (0.5 mg/m3); Skin OEL-DENMARK: TWA 0.1 ppm (0.5 mg/m3); Skin OEL-FINLAND: TWA 0.5 mg/m3; STEL 1.5 mg/m3; Skin; CAR OEL-FRANCE: TWA 0.1 ppm (0.5 mg/m3); Skin; Carcinoge OEL-GERMANY: TWA 0.1 ppm (0.5 mg/m3); Skin OEL-INDIA: TWA 0.1 ppm (0.5 mg/m3); Skin OEL-THE NETHERLANDS:TWA 0.1 ppm (0.5 mg/m3);Skin OEL-THE PHILIPPINES:TWA 0.5 mg/m3;Skin OEL-RUSSIA:STEL 1 mg/m3;Skin OEL-SWITZERLAND: TWA 0.1 ppm (0.5 mg/m3); STEL 0.2 ppm; Skin OEL-UNITED KINGDOM: TWA 0.1 ppm (0.5 mg/m3); Skin

OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

**** SECTION 16 - ADDITIONAL INFORMATION ****

MSDS Creation Date: 7/31/1998 Revision #2 Date: 8/02/2000

The information above is believed to be accurate and represents the best

information currently available to us. However, we make no warranty of

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damages, howsoever arising, even if the company has been advised of the possibility of such damages.
