

Creation Date 01-Dec-2009

Revision Date 18-Feb-2019

Revision Number 5

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identification

Product Description: p-Anisidine
Cat No. : 104830000; 104830010; 104830050; 104832500
Synonyms 4-Methoxyaniline; 4-Methoxybenzeneamine; 4-Aminoanisole
Molecular Formula C7 H9 N O

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Laboratory chemicals.
Uses advised against No Information available

1.3. Details of the supplier of the safety data sheet

Company **UK entity/business name**
 Fisher Scientific UK
 Bishop Meadow Road, Loughborough,
 Leicestershire LE11 5RG, United Kingdom

EU entity/business name
 Acros Organics BVBA
 Janssen Pharmaceuticaaan 3a
 2440 Geel, Belgium

E-mail address begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11
 Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99
CHEMTREC Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP Classification - Regulation (EC) No 1272/2008

Physical hazards

Based on available data, the classification criteria are not met

Health hazards

Acute oral toxicity	Category 2 (H300)
Acute dermal toxicity	Category 1 (H310)
Acute Inhalation Toxicity - Dusts and Mists	Category 2 (H330)
Carcinogenicity	Category 1B (H350)
Specific target organ toxicity - (repeated exposure)	Category 2 (H373)

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Environmental hazards

Acute aquatic toxicity

Category 1 (H400)

2.2. Label elements



Signal Word

Danger

Hazard Statements

- H300 - Fatal if swallowed
- H310 - Fatal in contact with skin
- H330 - Fatal if inhaled
- H350 - May cause cancer
- H373 - May cause damage to organs through prolonged or repeated exposure
- H400 - Very toxic to aquatic life

Precautionary Statements

- P330 - Rinse mouth
- P302 + P350 - IF ON SKIN: Gently wash with plenty of soap and water
- P310 - Immediately call a POISON CENTER or doctor/ physician
- P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
- P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection

Additional EU labelling

Restricted to professional users

2.3. Other hazards

No information available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Component	CAS-No	EC-No.	Weight %	CLP Classification - Regulation (EC) No 1272/2008
o-Anisidine	90-04-0	EEC No. 201-963-1	0.1-0.7	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Muta. 2 (H341) Carc. 1B (H350)
p-Anisidine	104-94-9	EEC No. 203-254-2	>98.5	Acute Tox. 2 (H300) Acute Tox. 1 (H310) Acute Tox. 2 (H330) STOT RE 2 (H373) Aquatic Acute 1 (H400)

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Full text of Hazard Statements: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General Advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
Ingestion	Do not induce vomiting. Call a physician or Poison Control Center immediately.
Inhalation	Move to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
Self-Protection of the First Aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

4.2. Most important symptoms and effects, both acute and delayed

None reasonably foreseeable.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Extinguishing media which must not be used for safety reasons

No information available.

5.2. Special hazards arising from the substance or mixture

Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous Combustion Products

Carbon monoxide (CO), Carbon dioxide (CO₂), Nitrogen oxides (NO_x).

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and material for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Avoid dust formation. Use only under a chemical fume hood. Do not breathe vapors/dust. Do not ingest.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Store under an inert atmosphere.

7.3. Specific end use(s)

Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits

List source(s): IRE - 2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001. Published by the Health and Safety Authority.

Component	The United Kingdom	European Union	Ireland
o-Anisidine			TWA: 0.1 ppm 8 hr. TWA: 0.5 mg/m ³ 8 hr. STEL: 0.3 ppm 15 min STEL: 1.5 mg/m ³ 15 min Skin
p-Anisidine			TWA: 0.1 ppm 8 hr. TWA: 0.5 mg/m ³ 8 hr. STEL: 0.3 ppm 15 min

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			STEL: 1.5 mg/m ³ 15 min Skin
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Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust

Derived No Effect Level (DNEL) No information available

<u>Route of exposure</u>	<u>Acute effects (local)</u>	<u>Acute effects (systemic)</u>	<u>Chronic effects (local)</u>	<u>Chronic effects (systemic)</u>
Oral Dermal Inhalation				

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering Measures

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection

Safety glasses with side-shields (European standard - EN 166)

Hand Protection

Protective gloves

<u>Glove material</u>	<u>Breakthrough time</u>	<u>Glove thickness</u>	<u>EU standard</u>	<u>Glove comments</u>
Nitrile rubber	See manufacturers	-	EN 374	(minimum requirement)
Neoprene	recommendations			
Natural rubber				
PVC				

Skin and body protection

Long sleeved clothing

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

Large scale/emergency use

Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

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Recommended Filter type: Particulates filter conforming to EN 143

Small scale/Laboratory use Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
Recommended half mask:- Particle filtering: EN149:2001
When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls Prevent product from entering drains. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Grey, Brown	
Physical State	Solid	
Odor	No information available	
Odor Threshold	No data available	
pH	8.8	53 g/L aq.sol
Melting Point/Range	56 - 59 °C / 132.8 - 138.2 °F	
Softening Point	No data available	
Boiling Point/Range	240 - 243 °C / 464 - 469.4 °F	
Flash Point	122 °C / 251.6 °F	Method - No information available
Evaporation Rate	Not applicable	Solid
Flammability (solid,gas)	No information available	
Explosion Limits	No data available	
Vapor Pressure	0.02 hPa @ 20 °C	
Vapor Density	Not applicable	Solid
Specific Gravity / Density	1.060	
Bulk Density	No data available	
Water Solubility	soluble	
Solubility in other solvents	No information available	
Partition Coefficient (n-octanol/water)		
Component	log Pow	
o-Anisidine	1.18	
p-Anisidine	0.95	
Autoignition Temperature	450 °C / 842 °F	
Decomposition Temperature	> 300°C	
Viscosity	Not applicable	Solid
Explosive Properties	No information available	
Oxidizing Properties	No information available	

9.2. Other information

Molecular Formula	C7 H9 N O
Molecular Weight	123.15

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity None known, based on information available

10.2. Chemical stability Light sensitive, Air sensitive.

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10.3. Possibility of hazardous reactions

Hazardous Polymerization Hazardous polymerization does not occur.
Hazardous Reactions None under normal processing.

10.4. Conditions to avoid

Incompatible products. Excess heat. Avoid dust formation. Exposure to air. Exposure to light.

10.5. Incompatible materials

Strong oxidizing agents. Acids. Acid chlorides. Acid anhydrides. Chloroformates.

10.6. Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO₂). Nitrogen oxides (NO_x).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Product Information

(a) acute toxicity;
Oral Category 2
Dermal Category 1
Inhalation Category 2

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
o-Anisidine	LD50 = 1890 mg/kg (Rat) LD50 = 1150 mg/kg (Rat)	LD50 > 2000 mg/kg (Rat)	LC50 > 3800 mg/m ³ (Rat) 4 h LC50 > 3.87 mg/L (Rat) 4 h
p-Anisidine	LD50 = 1400 mg/kg (Rat) LD50 = 1320 mg/kg (Rat)	LD50 = 3200 mg/kg (Rat)	

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; No data available

(d) respiratory or skin sensitization;
Respiratory No data available
Skin No data available
No information available

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; Category 1B
The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	EU	UK	Germany	IARC
o-Anisidine	Carc Cat. 1B		Cat. 2	Group 2B
p-Anisidine			Cat. 3B	

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

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(i) STOT-repeated exposure; Category 2
Target Organs None known.

(j) aspiration hazard; Not applicable
Solid

Symptoms / effects, both acute and delayed No information available

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity effects

Very toxic to aquatic organisms. The product contains following substances which are hazardous for the environment.

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
o-Anisidine	LC50: > 100 mg/L, 96h static (Brachydanio rerio)			EC50 = 1500 mg/L 24 h
p-Anisidine		EC50: = 0.18 mg/L, 48h (Daphnia magna)		EC50 = 14.5 mg/L 30 min

12.2. Persistence and degradability

Persistence

Degradation in sewage treatment plant

Soluble in water, Persistence is unlikely, based on information available.
Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

12.3. Bioaccumulative potential

Bioaccumulation is unlikely

Bioconcentration factor (BCF)

54

Component	log Pow	Bioconcentration factor (BCF)
o-Anisidine	1.18	No data available
p-Anisidine	0.95	No data available

12.4. Mobility in soil

The product is water soluble, and may spread in water systems. Will likely be mobile in the environment due to its water solubility. Highly mobile in soils

12.5. Results of PBT and vPvB assessment

No data available for assessment.

12.6. Other adverse effects

Endocrine Disruptor Information Persistent Organic Pollutant Ozone Depletion Potential

This product does not contain any known or suspected endocrine disruptors
This product does not contain any known or suspected substance
This product does not contain any known or suspected substance

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues / Unused Products

Should not be released into the environment. Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

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Contaminated Packaging Dispose of this container to hazardous or special waste collection point.

European Waste Catalogue (EWC) According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.

Other Information Do not dispose of waste into sewer. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Do not let this chemical enter the environment.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

14.1. UN number UN2811
14.2. UN proper shipping name TOXIC SOLID, ORGANIC, N.O.S
14.3. Transport hazard class(es) 6.1
14.4. Packing group III

ADR

14.1. UN number UN2811
14.2. UN proper shipping name TOXIC SOLID, ORGANIC, N.O.S
14.3. Transport hazard class(es) 6.1
14.4. Packing group III

IATA

14.1. UN number UN2811
14.2. UN proper shipping name TOXIC SOLID, ORGANIC, N.O.S
14.3. Transport hazard class(es) 6.1
14.4. Packing group III

14.5. Environmental hazards Dangerous for the environment
 Product is a marine pollutant according to the criteria set by IMDG/IMO

14.6. Special precautions for user No special precautions required

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable, packaged goods

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories X = listed.

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	IECSC	AICS	KECL
o-Anisidine	201-963-1	-		X	X	-	X	X	X	X	KE-2321 1
p-Anisidine	203-254-2	-		X	X	-	X	X	X	X	KE-2321 2

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
o-Anisidine		Use restricted. See item 28. (see	SVHC Candidate list - 201-963-1 - Carcinogenic, Article 57a

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		http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32006R1907:EN:NOT for restriction details) Use restricted. See item 43. (see http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32006R1907:EN:NOT for restriction details)	
p-Anisidine			SVHC Candidate list - Carcinogenic (Article 57a)

National Regulations

Component	Germany - Water Classification (VwVwS)	Germany - TA-Luft Class
o-Anisidine	WGK 3	
p-Anisidine	WGK 2	Class I : 20 mg/m ³ (Massenkonzentration)

Component	France - INRS (Tables of occupational diseases)
o-Anisidine	Tableaux des maladies professionnelles (TMP) - RG 15,RG 15bis
p-Anisidine	Tableaux des maladies professionnelles (TMP) - RG 15,RG 15bis

Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment.
 Take note of Dir 76/769/EEC relating to restrictions on the marketing and use of certain dangerous substances and preparations

15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H300 - Fatal if swallowed
 H310 - Fatal in contact with skin
 H330 - Fatal if inhaled
 H350 - May cause cancer
 H373 - May cause damage to organs through prolonged or repeated exposure
 H400 - Very toxic to aquatic life
 H301 - Toxic if swallowed
 H311 - Toxic in contact with skin
 H331 - Toxic if inhaled
 H341 - Suspected of causing genetic defects

Legend

<p>CAS - Chemical Abstracts Service</p> <p>EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances</p> <p>PICCS - Philippines Inventory of Chemicals and Chemical Substances</p> <p>IECSC - Chinese Inventory of Existing Chemical Substances</p> <p>KECL - Korean Existing and Evaluated Chemical Substances</p> <p>WEL - Workplace Exposure Limit</p> <p>ACGIH - American Conference of Governmental Industrial Hygienists</p> <p>DNEL - Derived No Effect Level</p> <p>RPE - Respiratory Protective Equipment</p> <p>LC50 - Lethal Concentration 50%</p> <p>NOEC - No Observed Effect Concentration</p> <p>PBT - Persistent, Bioaccumulative, Toxic</p>	<p>TSCA - United States Toxic Substances Control Act Section 8(b) Inventory</p> <p>DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List</p> <p>ENCS - Japanese Existing and New Chemical Substances</p> <p>AICS - Australian Inventory of Chemical Substances</p> <p>NZIoC - New Zealand Inventory of Chemicals</p> <p>TWA - Time Weighted Average</p> <p>IARC - International Agency for Research on Cancer</p> <p>PNEC - Predicted No Effect Concentration</p> <p>LD50 - Lethal Dose 50%</p> <p>EC50 - Effective Concentration 50%</p> <p>POW - Partition coefficient Octanol:Water</p> <p>vPvB - very Persistent, very Bioaccumulative</p>
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ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

OECD - Organisation for Economic Co-operation and Development
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ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from Ships

ATE - Acute Toxicity Estimate

VOC - Volatile Organic Compounds

Key literature references and sources for data

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Training Advice

Chemical incident response training.

Creation Date	01-Dec-2009
Revision Date	18-Feb-2019
Revision Summary	Not applicable.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet