FOREWORD INTRODUCTION

M-NITROANILINE

CAS N°: 99-09-2

Substance

End Point	:	**IDENTIFIERS, PHYSICAL AND CHEMICAL PROPERTIES**
Chemical Name	:	**Benzenamine, 3-nitro-**
Common Name	:	**m-Nitroaniline**
CAS Number	:	**99-09-2**
RTECS Number	:	**BY6825000**

Synonyms

Aniline, m-nitro-
Amarthol fast orange R base
m-Aminonitrobenzene
Azobase MNA
C.I. 37030
C.I. Azoic diazo component 7
Daito orange base R
Devol orange R
Diazo fast orange R
Fast orange base R
Fast orange M base
Fast orange MM base
Fast orange R base
Fast orange R salt
Hiltonil fast orange R base
MNA
Naphtoelan orange R base
Nitranilin
m-Nitroaminobenzene
meta-Nitroaniline
3-Nitroaniline
3-Nitrobenzenamine
m-Nitrophenylamine
Orange base irga I

Properties & Definitions

Molecular Formula	:	**C6H6N2O2**
Molecular Weight	:	**138.14**
Melting Point	:	**114C**
Boiling Point	:	**306C**
State	:	**Solid**
Vapour Pressure	:	**3.1E-6 kPa(2.3E-5 mmHg)at 25C**
Octanol/Water Partition Coefficient	:	**log Pow = 1.54 at 25C calculated**
Water Solubility	:	**1.14 g/L**
Impurities	:	**The tested chemical could contain <1-3% impurities. Purity of industrial product unknown.**
General Comments	:	For VP the value 1.7E-5 kPa at 40C was also reported (gas saturation method applied OECD Guideline 104, GLP: yes). For Log Pow the value 1.37 (measured) was also reported (OECD Guideline 107, GLP: yes). Non-volatile. Stable in neutral, acidic or alkaline solutions.

Overall Evaluation

NEEDS FURTHER WORK

SIDS INITIAL ASSESSMENT

3-Nitrobenzenamine is non-volatile stable solid, and the production volume is 13 tonnes/year for 1990, 16 tonnes for 1991, 7 tonnes for 1992 and 0 tonnes for 1993, respectively, in Japan. The production volume in Germany is 454 tonnes for 1972 and 2270 tonnes for 1976. Canada also produced less than 100 tonnes/year. This chemical is used as raw material for dyestuff in closed system.

This chemical is stable in neutral, acidic or alkaline solutions, and is classified as "not readily biodegradable" and "low bioaccumulation potential".

The fact that the chemical is moderately toxic to daphnids, slightly toxic to fish and algae, implies the environmental risk presumably to be low. The PEC is lower than the MTC.

The chemical showed genotoxic effects in bacterial test, non-bacterial test in vitro and micronucleus test, and LOAEL for repeated dose toxicity was 15 mg/kg/day and NOAEL for reproductive toxicity was 50 mg/kg/day in

male rats and 5 mg/kg/day in female rats.
Daily intake of 3-nitrobenzenamine was estimated as 8.17E-7 mg/day from calculation using MNSEM 145I exposure model.

ENVIRONMENTAL EXPOSURE

ESTIMATION OF ENVIRONMENTAL FATE, PATHWAY AND CONCENTRATION

Comparison of calculated environmental concentration using several models:

MNSEM Model:
Air: 2.64E-12 ug/L; Water: 3.62E-4 ug/L; Soil: 1.23E-4 ug/kg; Sediment: 3.83E-3 ug/kg
CHEMCAN2 Model:
Air: 6.05E-13 ug/L; Water: 3.62E-4 ug/L; Soil: 4.04E-8 ug/kg; Sediment: 6.48E-4 ug/kg
CHEMFRAN Model:
Air: 6.50E-15 ug/L; Water: 3.62E-4 ug/L; Soil: 1.99E-9 ug/kg; Sediment: 6.48E-4 ug/kg
UKMODEL Model:
Air: 5.41E-11 ug/L; Water: 3.63E-4 ug/L; Soil: 1.63E-3 ug/kg; Sediment: 3.26E-3 ug/kg

CONSUMER EXPOSURE

The chemical substance is fully changed to other substances (dyestuffs and m-nitrophenol). So, there are no actual use of this substance itself and there are no emission and no exposure to consumer.

OCCUPATIONAL EXPOSURE

Production is done through reaction and purification operation. Basically there are no emission and no exposure to workers except drying and packaging process. No data on work place monitoring have been reported. Occupational exposure seems to be low.

CONCLUSION

In conclusion, 3-nitrobenzenamine is persistent, and ecotoxicological tests showed moderate toxicity. In toxicology tests, the chemical showed genotoxic effects in bacterial test, non-bacterial test in vitro and micronucleus test. In the case of applying the OECD Provisional Guidance for Initial Hazard Assessment of Full SIDS, this chemical have to perform risk reduction. However, this chemical is used mainly as raw material for dyestuff materials at closed system, and there are no other information on exposure. Therefore, although exposure to general population through environment may be low, occupational risk should be considered from its genotoxic properties.

RECOMMENDATION

Based on the genotoxicity of the chemical, we concluded that further work should be considered.
Monitoring and risk reduction in work place of the production site should be considered from its toxicological properties. Also, continous international information gathering on exposure is recommended as further work.

Production-Trade

Chemical Name : **Benzenamine, 3-nitro-**
CAS Number : **99-09-2**
Geographic Area : **CAN**

Production

Quantity	*Year*
<100 t - P	

References

!SIDSP*
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, (1994)

Production-Trade

Chemical Name : **Benzenamine, 3-nitro-**
CAS Number : **99-09-2**
Geographic Area : **JPN**

Production

Quantity	*Year*
0 t - P	**1993**
7 t - P	**1992**
24 t - IM	**1992**
16 t - P	**1991**
13 t - P	**1990**
21 t - IM	**1990**

References

!SIDSP*
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, (1994)

Production-Trade

Chemical Name : **Benzenamine, 3-nitro-**
CAS Number : **99-09-2**
Geographic Area : **DEU**

Production

Quantity	*Year*
2270 t - P	**1976**
45100 t - IM	**1975**
454 t - P	**1972**
44200 t - IM	**1972**

References

!SIDSP*
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, (1994)

Processes

Chemical Name : **Benzenamine, 3-nitro-**
CAS Number : **99-09-2**

Process

Process comments : In Japan: production is done through reaction and purification operation. Partial reduction of m-dinitrobenzene with Na2S2 to crude 3-nitroaniline. Followed by purification of 3-nitroaniline. In Germany: 1) Partial reduction of m-dinitrobenzene with sodium disulfide. 2) From aniline by nitration after acetylation, with subsequent removal of acetyl group by hydrolysis.

References

Secondary Reference : **!SIDSP***
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, (1994)

Uses

Chemical Name : **Benzenamine, 3-nitro-**
CAS Number : **99-09-2**

Use

Quantity	*Year*	*Comments*
		Used as raw material for dyestuffs in closed system. Chemical intermediate for azoic coupling component 17 and the dyes, disperse yellow 5 and acid blue 29. The chemical substance is fully changed to other substances (dyestuffs and m-nitrophenol). So, there are no actual use of this substance itself.

References

Secondary References : **!SIDSP***
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, (1994)

Study

End Point	:	**Pathway into the Environment and Environmental Fate.**
Chemical Name	:	**Benzenamine, 3-nitro-**
CAS Number	:	**99-09-2**

Quantity Transported

General Comments	:	As the chemical is used as an intermediate in closed system there is no emmission to the environment.

References

Secondary Reference	:	**!SIDSP***

OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, (1994)

Study

End Point : **CONCENTRATION**
Chemical Name : **Benzenamine, 3-nitro-**
CAS Number : **99-09-2**
Geographic Area : **JPN**

Test Subject

Organism	*Medium*	*Specification*	*Lifestage*	*Sex*
	AIR			
	WATER			
	SOIL			

Test Substance

Description of the test substance : Multi-Phase Non-Steady State Equilibrium Model for Evaluation of Fate of Chemicals in Environment consisting of Air, Water, Soil and Sediment Phases. Version 1.4.5I. Also called MNSEM 145I. (Presented by Kikuo Yoshida).

Test Results

Matrix	*Concentrations*	*Spec.*	*Date*
	2.64E-15 mg/L In air. 4.66E-13 ppm also reported. Steady state mass = 5.27E-3 g.		
	3.62E-7 mg/L In water. Steady state mass = 7.24E+3 g.		
	1.23E-7 mg/kg In soil. Steady state mass = 1.97E+2 g.		
	3.83E-6 mg/kg In sediment. Steady state mass = 3.83E+2 g.		

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General Comments : Clearing time 28 days. All values are estimated.

References

Primary Reference : **#URMEA***
Unpublished Report on Exposure Estimation Test conducted by MITI and Environmental Agency, Japan

Secondary Reference : **!SIDSP***
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, (1994)

Study

End Point	:	**CONCENTRATION**
Chemical Name	:	**Benzenamine, 3-nitro-**
CAS Number	:	**99-09-2**
Study type	:	**FIELD**
Geographic Area	:	**JPN**

Test Subject

Organism	*Medium*	*Specification*	*Lifestage*	*Sex*
	AQ	**SURF**		
	SOIL			
	SED			

Test Results

Matrix	*Concentrations*	*Spec.*	*Date*
	0 ug/L		**1978**

Not detected in surface water in 8 areas in Japan. Detection limit 0.3 - 1 ug/L

	0 ug/L		**1978**

Not detected in sediment/soil in 5 areas in Japan. Detection limit 0.01 - 0.0333 ug/g

References

Primary Reference : **#MOREA***

Environmental Monitoring of Chemicals, Environmental Survey Report (Office of Health Studies, Department of Environmental Health), Japan

Secondary Reference : **!SIDSP***

OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, (1994)

Study

End Point	:	**CONCENTRATION**
Chemical Name	:	**Benzenamine, 3-nitro-**
CAS Number	:	**99-09-2**
Geographic Area	:	**JPN**

Test Subject

Organism	*Medium*	*Specification*	*Lifestage*	*Sex*
	FOOD			
	FOOD			
	PLANT			

Test Results

Matrix	Concentrations	Spec.	Date
In meat.	**4.41E-12 mg/L**		
In milk.	**3.64E-12-3.64E-10 mg/L**		
In vegetation.	**1.54E-7 mg/L**		

General Comments : All above given values are calculated using MNSEM 1451 method.

References

Primary Reference :

#URMEA*

Unpublished Report on Exposure Estimation Test conducted by MITI and Environmental Agency, Japan

Secondary Reference :

!SIDSP*

OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, (1994)

Study

End Point	:	**HUMAN INTAKE AND EXPOSURE**
Chemical Name	:	**Benzenamine, 3-nitro-**
CAS Number	:	**99-09-2**
Geographic Area	:	**JPN**

Test Subject

Organism	*Medium*	*Specification*	*Route*	*Lifestage*	*Sex*
HUMAN	**AIR**	**FRESH**			
	AQ	**FRESH**			
	FOOD				

Test Method and Conditions

Test method description : Multi-Phase Non-Steady State Equilibrium Model for Evaluation of Fate of Chemicals in Environment Consisting of Air, Water, Soil and Sediment Phases. Version 1.4.5I. Also called MNSEM 145I. (Presented by Kikuo Yoshida).

Test Results

Intake	*Spec.*	*Date*
5.22E-11 mg/d Through inhalation of air		
7.24E-7 mg/d Through drinking water		
3.48E-8 mg/d Through ingestion of fish		
3.27E-13 mg/d Through ingestion of meat		
4.45E-13 mg/d Through ingestion of milk		
5.75E-8 mg/d Through ingestion of vegetables		
8.17E-7 mg/d Total exposure dose		

General Comments : As there is no actual use of the substance itself, there is basically no exposure to man, except during drying and packaging process. No data on work place monitoring have been reported. Occupational exposure seems to be low.

References

Primary Reference : **#URMEA***
Unpublished Report on Exposure Estimation Test conducted by MITI and Environmental Agency, Japan

Secondary Reference : **!SIDSP***
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, (1994)

Study

End Point	:	**BIODEGRADATION**
Chemical Name	:	**Benzenamine, 3-nitro-**
CAS Number	:	**99-09-2**
Study type	:	**LAB**

Test Subject

Organism	*Medium*	*Specification*
MCR	**AQ**	**SLUDG**

Species/strain/system : Activated sludge (standard) 30 mg/L as suspended solid.

Test Substance

Purity Grade : **98%**

Test Method and Conditions

Test method description : OECD Guideline 301C. The sludge samples were mixed by stirring in a single container and then cultured for 1 month at 25C. GLP: yes

Temperature : **25 C**

(An)aerobic : **AEROB**

Exposure

Exposure Period : **14 d**

Dose / Concentration : **100 mg/L**

Test Results

Quantity		*Time*	*Comments on result*
0 %	AV	**14 d**	Degree of biodegradation from BOD 14
0 %	AV		Degree of biodegradation from DOC
3 %	AV		Degree of Biodegradation from UV

General Comments : Results indicate that the substance should be classified as "not readily biodegradable".

References

Primary Reference : **#MCIBD***
Unpublished Report on Biodegradation Test of (specific chemical) conducted by MITI

Secondary Reference : **!SIDSP***
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, (1994)

Study

End Point	:	**PHOTODEGRADATION**
Chemical Name	:	**Benzenamine, 3-nitro-**
CAS Number	:	**99-09-2**

Test Substance

Purity Grade	:	**99.6%**

Test Method and Conditions

Test method description	:	W. J. Lyman et al. Handbook of Chemical Properties Estimation Method. (McGraw Hill Book Co., 1981). GLP: no. Depth in the water body 500 cm. Quantum yield for disappearance of chemicals by photolysis under solar irradiation 0.01.

Exposure

Dose / Concentration	:	**6.9 g/L**

Test Results

Quantity	*Time*	*Comments on result*
50 %	AV	Half-life for photolysis = 1.26E-2 years. Photochemical degradation rate = 8.74E-11 mol/L/s.

References

Primary Reference	:	**#MCITH*** Unpublished Report on Hydrolysis and Photodegradation Test of (specific chemical), HPV/SIDS test conducted by MITI
Secondary Reference	:	**iSIDSP*** OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, (1994)

Study

End Point	:	**HYDROLYSIS**
Chemical Name	:	**Benzenamine, 3-nitro-**
CAS Number	:	**99-09-2**
Study type	:	**LAB**
Medium	:	**AQ**
Specifications	:	**FRESH**

Test Substance

Purity Grade	:	**99.6%**

Test Method and Conditions

Test method description	:	OECD Guideline 111. Hydrolysis as a function to pH (measured).
Temperature	:	**25 C**
pH	:	**4-9**

Exposure

Exposure Period	:	**>1 y**

Test Results

Quantity	*Time*	*Comments on result*
50 %	**>1 y**	Half-life at pH 4.0, 7.0, and 9.0 at 25C.

References

Primary Reference :

#MCITH*

Unpublished Report on Hydrolysis and Photodegradation Test of (specific chemical), HPV/SIDS test conducted by MITI

Secondary Reference :

!SIDSP*

OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, (1994)

Study

End Point	:	**BIOCONCENTRATION**
Chemical Name	:	**Benzenamine, 3-nitro-**
CAS Number	:	**99-09-2**
Study type	:	**LAB**

Test Substance

Purity Grade	:	**99.6%**

Test Method and Conditions

Test method description	:	OECD Guideline 305C. GLP: yes. Flow-through test.

Exposure

Exposure Period	:	**6 wk**

Test Results

Organ	*Bioconcent. Factor*	*Calc Basis*	*Time*	*State*	*Comments on result*
	<1		**6 wk**		Log BCF level 1 exposure
	<1		**6 wk**		Log BCF level 2 exposure

References

Primary Reference :

#URMEA*

Unpublished Report on Exposure Estimation Test conducted by MITI and Environmental Agency, Japan

Secondary Reference :

!SIDSP*

OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, (1994)

Study

End Point : **MAMMALIAN ACUTE TOXICITY**
Chemical Name : **Benzenamine, 3-nitro-**
CAS Number : **99-09-2**

Species/strain/system : Guinea pigs, strain not specified
Dose / Concentration : **450 mg/kg**

Test Method and Conditions

Test method description : No information was provided.

Test Results

Organism	*Medium*	*Spec.*	*Route*	*Lifestage*	*Sex*	*Effect*	*Effect Comments*
GPIG			**ORL**	**ADULT**		**LD50**	Oral LD50 for guinea pigs was established as 450 mg/kg under the test conditions.

References

Primary Reference : **RTECS***
Registry of Toxic Effects of Chemical Substances

Secondary Reference : **!SIDSP***
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 14, (1994)

Study

End Point : **MAMMALIAN ACUTE TOXICITY**
Chemical Name : **Benzenamine, 3-nitro-**
CAS Number : **99-09-2**
Study type : **RAT**

Species/strain/system : Rat, strain not specified
Dose / Concentration : **535 mg/kg**

Test Method and Conditions

Test method description : No information provided.

Test Results

Organism	*Medium*	*Spec.*	*Route*	*Lifestage*	*Sex*	*Effect*	*Effect Comments*
			ORL	**ADULT**		**LD50**	Oral LD50 for rats was established as 535 mg/kg under the test conditions.

References

Primary Reference : **RTECS***
. Registry of Toxic Effects of Chemical Substances

Secondary Reference : **!SIDSP***
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 14, (1994)

Study

End Point : **MAMMALIAN ACUTE TOXICITY**
Chemical Name : **Benzenamine, 3-nitro-**
CAS Number : **99-09-2**

Species/strain/system : Mouse, strain not specified
Dose / Concentration : **308 mg/kg**

Test Method and Conditions

Test method description : No information was provided.

Test Results

Organism	*Medium*	*Spec.*	*Route*	*Lifestage*	*Sex*	*Effect*	*Effect Comments*
MOUSE			**ORL**	**ADULT**		**LD50**	Oral LD50 for mice was established as 308 mg/kg under the test conditions.

References

Primary Reference : **RTECS***
Registry of Toxic Effects of Chemical Substances

Secondary Reference : **!SIDSP***
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 14, (1994)

Study

End Point : **MAMMALIAN ACUTE TOXICITY**
Chemical Name : **Benzenamine, 3-nitro-**
CAS Number : **99-09-2**

Species/strain/system : Rat, SD strain
Dose / Concentration : **540 mg/kg**

Test Method and Conditions

Test method description : No information was provided.

Test Results

Organism	*Medium*	*Spec.*	*Route*	*Lifestage*	*Sex*	*Effect*	*Effect Comments*
RAT			**ORL**	**ADULT**	**M**	**LD50**	Oral LD50 for male rats(SD strain) was established as 540 mg/kg under the test conditions.

References

Primary Reference : **TXAPA9**
Vernot E. H. et al. Toxicology and Applied Pharmacology, 42, 417, (1972)

Secondary Reference : **!SIDSP***
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 14, (1994)

Study

End Point : **MAMMALIAN ACUTE TOXICITY**
Chemical Name : **Benzenamine, 3-nitro-**
CAS Number : **99-09-2**

Species/strain/system : Mouse, CF-1 strain
Dose / Concentration : **310 mg/kg**

Test Method and Conditions

Test method description : No information was provided.

Test Results

Organism	*Medium*	*Spec.*	*Route*	*Lifestage*	*Sex*	*Effect*	*Effect Comments*
MOUSE			**ORL**	**ADULT**	**M**	**LD50**	Oral LD50 for CF-1 male mice was established as 310 mg/kg under the test conditions.

References

Primary Reference : **TXAPA9**
Vernot E. H. et al. Toxicology and Applied Pharmacology, 42, 417, (1972)

Secondary Reference : **!SIDSP***
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 14, (1994)

Study

End Point : **MAMMALIAN TOXICITY**
Chemical Name : **Benzenamine, 3-nitro-**
CAS Number : **99-09-2**
Study type : **LAB**

Test Subject

Organism	*Medium*	*Specification*	*Route*	*Lifestage*	*Sex*	*Number exposed*	*Number controls*
RAT			**ORL**	**ADULT**	**M**	**5/GROUP**	**5**
					F	**5/GROUP**	**5**

Species/strain/system : Crj:F344

Test Substance

Purity Grade : **99.8%**
Vehicle - Solvent : Olive oil

Test Method and Conditions

Test method description : Japanese Guideline for 28 Day Repeated Dose Toxicity Test of Chemicals. GLP: no.

Exposure

Exposure Type : **SHORT**
Exposure Period : **28 d**
Dose / Concentration : **15-170 mg/kg**
Exposure comments : Doses of: 0, 15, 50, 170 mg/kg/day were given in gavage for 28 days.

Test Results

Organ	*Effect*	*Rev.*	*OnSet*	*Sex*	*Affected in Exposed - Controls*
SKN	**COLOR**				

Cyanosis was observed in the dose groups of 170 mg/kg/day.

BLOOD **CHEM**

Methemoglobinemia was observed in the dose groups of 170 mg/kg/day.

LIVER **SIZE**
KIDNY **SIZE**
SPLN **SIZE**

Increases of liver, kidney and spleen weights in a dose related fashion, were observed.

BLOOD **CHNG**

Hemolytic anemia was observed in a dose-related fashion in in both sexes.

BW DECR

Inhibition of the body weight gain was observed in the highest dose groups for both sexes.

KIDNY CHNG M

On the histological examination there was an evidence of lipofuscin deposition mainly occuring in the proximal renal tubules in the male animals of the highest dose group.

SPLN CHNG
LIVER CHNG

Hemosiderin deposition in the spleen and swelling of hepatocytes were observed on histological examination in all dose groups.

BMW CHNG

Erythroid hyperplasia was observed on histological examination in all treated groups.

General Comments : LOAEL dose at which no toxic effects were observed was established as 15 mg/kg/day under the test conditions. EDLC estimated dose of low concern was calculated as 0.003 mg/kg/day. There were some effects on reproductive organs observed in the males of the highest dose group in the form of testicular atrophy. Histologically this dose group showed reduction of spermatogenesis with multinucleated giant cell formation.

References

Primary Reference : **#URMHW***

Unpublished Report on Combined Repeated Dose and Reproductive/ Developmental Toxicity Screening Test conducted by the Ministry of Health and Welfare (MHW), Japan

Secondary Reference : **!SIDSP***

OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 16-17, (1994)

Study

End Point : **MUTAGENICITY**
Chemical Name : **Benzenamine, 3-nitro-**
CAS Number : **99-09-2**
Study type : **BACT**

Test Subject

Organism	*Medium*	*Specification*	*Route*	*Lifestage*	*Sex*	*Number exposed*	*Number controls*
			VTR				

Species/strain/system : Salmonella typhimuruim, strains: TA97, TA98, TA100, TA102

Test Substance

Vehicle - Solvent : DMSO

Test Method and Conditions

Test method description : Japanese Guideline for Screening Mutagenicity Testing of Chemicals.

Exposure

Dose / Concentration : **25-5000 ug/ PLATE**
Exposure comments : Doses of: 0, 25, 50, 100, 250, 500, 1000, 2500, 5000 ug/plate were utilised with and without metabolic activation. Positive control for -S9 strains TA98 and TA100 was AF-2, TA97 was ICR-191, TA102 was mitomycin C; for +S9 all strains it was 2-aminoanthracene.

Test Results

Organ	*Effect*	*Rev.*	*OnSet*	*Sex*	*Affected in Exposed - Controls*
	MUT				

The results showed a positive mutagenic effect for the bacterial strains TA98 and TA100 under the test conditions.

NEF

There was no mutagenic effect observed in the strains TA97 and TA102.

References

Primary Reference : **#URMMT***
Unpublished Report on Mutagenicity Test conducted by the Ministry of Health and Welfare (MHW), Japan

Secondary Reference : **!SIDSP***
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 17-19, (1994)

Study

End Point : **MUTAGENICITY**
Chemical Name : **Benzenamine, 3-nitro-**
CAS Number : **99-09-2**
Study type : **LAB**

Test Subject

Organism	*Medium*	*Specification*	*Route*	*Lifestage*	*Sex*	*Number exposed*	*Number controls*
BACT			**VTR**				

Species/strain/system : Salmonella typhimuruim, strains TA98, TA100 and E. coli strain WP2 uvrA/pKM101

Test Substance

Vehicle - Solvent : DMSO

Test Method and Conditions

Test method description : Standard Preincubation Assay. GLP: no

Exposure

Exposure Type : **SHORT**
Dose / Concentration : **25-5000 ug/ PLATE**
Exposure comments : Doses of: 0, 25, 50, 100, 250, 500, 1000, 2500, 5000 ug/plate were utilised in the preincubation assay with and without metabolic activation. Positive control: for -S9 was AF-2 for strains TA98 and TA100; for +S9 was 2-aminoanthracene.

Test Results

Organ	*Effect*	*Rev.*	*OnSet*	*Sex*	*Affected in Exposed - Controls*
	MUT				

Mutagenic effect was observed in cultures with and without metabolic activation under the conditions of testing.

General Comments : No result given in SIDS dossier for E. coli.

References

Primary Reference : **SAIGBL**
Kawai, A. et al. Sangyo Igalu (Japanese Journal of Industrial Health), 29, 34, (1987)

Secondary Reference : **!SIDSP***
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 17-19, (1994)

Study

End Point	:	**MUTAGENICITY**
Chemical Name	:	**Benzenamine, 3-nitro-**
CAS Number	:	**99-09-2**
Study type	:	**LAB**

Test Subject

Organism	*Medium*	*Specification*	*Route*	*Lifestage*	*Sex*	*Number exposed*	*Number controls*
BACT			**VTR**				

Species/strain/system	:	Salmonella typhimuruim, strains TA98, TA100, TA1535, TA1537, TA1538

Test Substance

Purity Grade	:	**98%**
Vehicle - Solvent	:	DMSO

Test Method and Conditions

Test method description	:	Pour-plate Assay

Exposure

Exposure Type	:	**SHORT**
Dose / Concentration	:	**25-5000 ug/ PLATE**
Exposure comments	:	Doses of: 0, 25, 50, 100, 250, 500, 1000, 2500, 5000 ug/plate were utilised with and without metabolic activation. Positive control: for -S9 was AF-2; for +S9 was 2-aminoanthracene. 3 plates/test, 2 replicates.

Test Results

Organ	*Effect*	*Rev.*	*OnSet*	*Sex*	*Affected in Exposed - Controls*
	MUT				

Mutagenic effects were observed in all bacterial strain cultures without metabolic activation.

References

Primary Reference	:	**MUREAV** Shimizu, M. and Yano, E. Mutation Research, 170, 11, (1986)
Secondary Reference	:	**!SIDSP*** OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 17-19, (1994)

Study

End Point : **MUTAGENICITY**
Chemical Name : **Benzenamine, 3-nitro-**
CAS Number : **99-09-2**
Study type : **LAB**

Test Subject

Organism	*Medium*	*Specification*	*Route*	*Lifestage*	*Sex*	*Number exposed*	*Number controls*
BACT			**VTR**				

Species/strain/system : Salmonella typhimuruim, strains TA98, TA100, TA1535, TA1537, TA1538

Test Substance

Vehicle - Solvent : DMSO

Test Method and Conditions

Test method description : Preincubation Assay

Exposure

Exposure Type : **SHORT**
Dose / Concentration : **25-5000 ug/ PLATE**
Exposure comments : Doses of: 0, 25, 50, 100, 250, 500, 1000, 2500, 5000 ug/plate were utilised in cultures with and without metabolic activation. Positive control: for-S9 was AF-2 and for +S9 was 2-aminoanthracene. 3 plates/test, 2 replicates.

Test Results

Organ	*Effect*	*Rev.*	*OnSet*	*Sex*	*Affected in Exposed - Controls*
	MUT				

There was a positive effect of mutagenesis in the cultures with and without metabolic activation on bacterial strains TA98, TA1535, TA1538 and negative effects on the strains TA100 and TA1537.

References

Primary Reference : **IJCMDW**
Shahin, M. M. International Journal of Cosmetic Science, 7, 277, (1985)

Secondary Reference : **!SIDSP***
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 17-19, (1994)

Study

End Point : **MUTAGENICITY**
Chemical Name : **Benzenamine, 3-nitro-**
CAS Number : **99-09-2**
Study type : **LAB**

Test Subject

Organism	*Medium*	*Specification*	*Route*	*Lifestage*	*Sex*	*Number exposed*	*Number controls*
BACT			**VTR**				

Species/strain/system : Salmonella typhimuruim TA98, TA100

Test Substance

Purity Grade : **97%**
Vehicle - Solvent : DMSO

Test Method and Conditions

Test method description : Modified Preincubation Assay. GLP: no

Exposure

Exposure Type : **SHORT**
Dose / Concentration : **25-5000 ug/ PLATE**
Exposure comments : Doses of: 0, 25, 50, 100, 250, 500, 1000, 2500, 5000 were utilised with and without metabolic activation. Positive control: for -S9 was AF-2, for +S9 was 2-aminoanthracene. 3 plates/test in 2 replicates.

Test Results

Organ	*Effect*	*Rev.*	*OnSet*	*Sex*	*Affected in Exposed - Controls*
	MUT				

There was a positive mutagenic effect observed in cultures with metabolic activation.

General Comments : In the test results with metabolic activation both positive and negative effects are marked.

References

Primary Reference : **ENMUDM**
Dellarco, V. L. and Prival, M. J. Environmental Mutagenesis, 213, 116, (1989)

Secondary Reference : **!SIDSP***
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 17-19, (1994)

Study

End Point : **MUTAGENICITY**
Chemical Name : **Benzenamine, 3-nitro-**
CAS Number : **99-09-2**
Study type : **LAB**

Test Subject

Organism	*Medium*	*Specification*	*Route*	*Lifestage*	*Sex*	*Number exposed*	*Number controls*
MOUSE					**M**		
					F		

Species/strain/system : Crj:BDF1 strain

Test Substance

Purity Grade : **99.9%**
Vehicle - Solvent : 0.5% CMC sodium solution

Test Method and Conditions

Test method description : Japanese Guideline for Screening Mutagenicity Testing of Chemicals. GLP: yes

Exposure

Exposure Type : **SHORT**
Dose / Concentration : **75-300 mg/kg**
Exposure comments : Doses of: 0, 75, 150, 300 mg/kg were utilised for micronucleus test assay.

Test Results

Organ	*Effect*	*Rev.*	*OnSet*	*Sex*	*Affected in Exposed - Controls*
	CELL				

The lowest concentration producing toxicity was 400 mg/kg/day under the test conditions.

MUT

There were mutagenic effects observed under the test conditions of the experiment.

General Comments : The test material was classified as "positive" under the experimental conditions used.

References

Primary Reference : **#URMMT***
Unpublished Report on Mutagenicity Test conducted by the Ministry of Health and Welfare (MHW), Japan

Secondary Reference : **!SIDSP***
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 20, (1994)

Study

End Point	:	**REPRODUCTION**
Chemical Name	:	**Benzenamine, 3-nitro-**
CAS Number	:	**99-09-2**
Study type	:	**LAB**

Test Subject

Organism	*Medium*	*Specification*	*Route*	*Lifestage*	*Sex*	*Number exposed*	*Number controls*
RAT			**ORL**	**ADULT**	**M**	**13/GROUP**	**13**
					F	**13/GROUP**	**13**

Species/strain/system : Crj:CD(SD)

Test Substance

Purity Grade	:	**99.9%**
Vehicle - Solvent	:	5% CMC-sodium solution

Test Method and Conditions

Test method description	:	OECD Preliminary Reproductive/Developmental Toxicity Screening Test. GLP: yes

Exposure

Exposure Type	:	**SHORT**
Exposure Period	:	**42 d**
Dose / Concentration	:	**5-50 mg/kg/ day**
Exposure comments	:	Doses of: 0, 5, 15, 50 mg/kg/day were given in gavage for 42 days to male rats and from 14 day before mating through day 3 of lactation to female rats.

Test Results

Organ	*Effect*	*Rev.*	*OnSet*	*Sex*	*Affected in Exposed - Controls*
BW	**DECR**			**M**	

Body weight gain and food consumption during the first week of dosing were significantly suppressed in the high dose male rats.

SPLN	**SIZE**			**M**	
SPLN	**COLOR**				

All high-dose and 3 mid-dose male rats at the necropsy revealed enlarged and/or dark colored spleen.

LIVER	**SIZE**				

Few of the high-dose-group animals showed an enlarged liver at the necropsy examination.

BW	**DECR**				

Body weights of the high-dose groups during the dosing period were slightly but consistently lower than the controls. Results applied to both female and male rats.

SPLN **SIZE** **F**
SPLN **COLOR**

At the scheduled necropsy 8 high-dose and 1 mid-dose female rats revealed an enlarged and dark colored spleen.

DEATH **F**

1 of the high-dose group female died during delivery on the 23 day of gestation. There was no compound related clinical signs of toxicity before death of this animal.

NOAEL

No adverse effect level for P generation:male rats 50 mg/kg, female rats 5 mg/kg.

EDLC

Estimated dose of low concern was calculated as 0.01 mg/kg/day.

General Comments : 2 high-dose female rats and 1 of mid-dose females showed the signs of difficult labour and all of their offsprings died by the day of parturition. The mating performance and fertility were not affected by the test compound.

References

Primary Reference : **#MHRNB***
Unpublished Report on Preliminary Reproduction Toxicity Screening Test of (specific chemical)-HPV/SIDS test conducted by MHW

Secondary Reference : **!SIDSP***
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 21-23, (1994)

Study

End Point : **TERATOGENICITY**
Chemical Name : **Benzenamine, 3-nitro-**
CAS Number : **99-09-2**
Study type : **LAB**

Test Subject

Organism	Medium	Specification	Route	Lifestage	Sex	Number exposed	Number controls
RAT				**FETUS**			

Species/strain/system : Crj:CD(SD)

Test Substance

Purity Grade : **99.9%**
Vehicle - Solvent : 5% CMC-sodium solution

Test Method and Conditions

Test method description : OECD Preliminary Reproductive/Developmental Toxicity Screening Test. GLP: yes

Exposure

Exposure Type : **SHORT**
Dose / Concentration : **5-50 mg/kg/ day**
Exposure comments : Doses of: 0, 15, 15, 50 mg/kg/day of maternal exposure from fertilization through day 3 of post-natal life were tested for the effects of teratogenicity.

Test Results

Organ	Effect	Rev.	OnSet	Sex	Affected in Exposed - Controls
	NOAEL				

No adverse effect level for F-1 generation was established as 50 mg/kg.

DEATH

Considerable loss of offspring from dams in the high-dose and mid-dose groups was observed(tabulated data in Annex 6).

DEATH

All pups of 2 dams from the high-dose group and one from the mid-dose group died in connection with difficult labour.

General Comments : There was no mention of fetus malformation in the test results. The mating performance and fertility were not affected by the test compound. Signs of difficulty in labor and postnatal loss of offspring were observed in mid- and high-dose femalegroups. No remarkable histopathological change in the ovaries was observed in any of the non-pregnant females and in females which showed total litter loss after the parturition. The testicular and epididymal weights were comparable among all four groups. No compound-related histopathological changes in these organs were found in any of the males. Reproduction parameters (i.e., duration of gestation, number of corpora lutea, implantations and resorptions, litter size, and sex distribution) were comparable among all four groups including the control. Survival and body weights as well as the morphological development of pups were comparable among all groups.

References

Primary Reference : **#MHRNB***
Unpublished Report on Preliminary Reproduction Toxicity Screening Test of (specific chemical)-HPV/SIDS test conducted by MHW

Secondary Reference : **!SIDSP***
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 21-23, (1994)

Study

End Point	:	**AQUATIC ACUTE TOXICITY**
Chemical Name	:	**Benzenamine, 3-nitro-**
CAS Number	:	**99-09-2**
Species/strain/system	:	Orange-red Killifish (Oryzias ladipes)
Exposure Period	:	**48 h**
Dose / Concentration	:	**96 mg/L**

Test Method and Conditions

Test method description	:	JIS K0102. Static test. GLP: no.

Test Results

Organism	*Medium*	*Spec.*	*Route*	*Lifestage*	*Sex*	*Effect*	*Effect Comments*
FISH	**AQ**	**FRESH**				**LC50**	LC50 for 48 hours = 96 mg/L(w/v). (Reported as ppm(w/v)).

References

Secondary Reference	:	**!SIDSP*** OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, (1994)

Study

End Point : **AQUATIC TOXICITY**
Chemical Name : **Benzenamine, 3-nitro-**
CAS Number : **99-09-2**
Study type : **LAB**

Test Subject

Organism	*Medium*	*Specification*	*Route*	*Lifestage*	*Sex*	*Number exposed*	*Number controls*
ALGAE		**FRESH**					

Species/strain/system : Algae (Selenastrum capricornutum)

Test Substance

Purity Grade : **>99%**

Test Method and Conditions

Test method description : OECD Guideline. GLP: no

Exposure

Exposure Period : **72 h**

Test Results

Organ	*Effect*	*Rev.*	*OnSet*	*Sex*	*Affected in Exposed - Controls*
	EC50				

EC50 for 72 hours = 20 mg/L(w/v). (Reported as EbC50 = 20 ppm (w/v)).

References

Primary Reference : **#UREAF***
Unpublished Report on Toxicity to Fish Test conducted by Environmental Agency, Japan

Secondary Reference : **!SIDSP***
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, (1994)

Study

End Point : **AQUATIC TOXICITY**
Chemical Name : **Benzenamine, 3-nitro-**
CAS Number : **99-09-2**
Study type : **LAB**

Test Subject

Organism	*Medium*	*Specification*	*Route*	*Lifestage*	*Sex*	*Number exposed*	*Number controls*
CRUS	**AQ**	**FRESH**					

Species/strain/system : Water flea (Daphnia magna)

Test Substance

Purity Grade : **>99%**

Test Method and Conditions

Test method description : OECD Guideline. GLP: no. Probit method used to calculate values.

Exposure

Exposure Period : **24 h**

Test Results

Organ	*Effect*	*Rev.*	*OnSet*	*Sex*	*Affected in Exposed - Controls*

EC0

EC0 for 24 hours < 0.1 mg/L (w/v). (Reported as ppm).

EC50

EC50 for 24 hours = 36 mg/L (w/v). (Reported as ppm).

EC100

EC100 for 24 hours = 100 mg/L (w/v). (Reported as ppm).

References

Primary Reference : **#UREAF***
Unpublished Report on Toxicity to Fish Test conducted by Environmental Agency, Japan

Secondary Reference : **!SIDSP***
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, (1994)

Study

End Point : **AQUATIC TOXICITY**
Chemical Name : **Benzenamine, 3-nitro-**
CAS Number : **99-09-2**
Study type : **LAB**

Test Subject

Organism	*Medium*	*Specification*	*Route*	*Lifestage*	*Sex*	*Number exposed*	*Number controls*
CRUS	**AQ**	**FRESH**					

Species/strain/system : Water flea (Daphnia magna)

Test Substance

Purity Grade : **>99%**

Test Method and Conditions

Test method description : OECD Guideline. Static test. GLP: no

Exposure

Exposure Period : **21 d**

Test Results

Organ	*Effect*	*Rev.*	*OnSet*	*Sex*	*Affected in Exposed - Controls*
	NOEL				

No observed effect concentration (maximum) for 21 days = 0.5 mg/L (w/v). (Reported as ppm (w/v)).

First observed effect concentration (minimum) for 21 days = 1.6 mg/L (w/v). (Reported as ppm (w/v)).

References

Primary Reference : **#UREAF***
Unpublished Report on Toxicity to Fish Test conducted by Environmental Agency, Japan

Secondary Reference : **!SIDSP***
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, (1994)

Study

End Point : **AQUATIC TOXICITY**
Chemical Name : **Benzenamine, 3-nitro-**
CAS Number : **99-09-2**
Study type : **LAB**

Test Subject

Organism	*Medium*	*Specification*	*Route*	*Lifestage*	*Sex*	*Number exposed*	*Number controls*
FISH	**AQ**	**FRESH**					

Species/strain/system : Orange-red Killifish (Oryzias ladipes)

Test Substance

Purity Grade : **>99%**
Vehicle - Solvent : (DMSO: HCO-40 = 4:1)

Test Method and Conditions

Test method description : OECD Guideline. Semi-static test. GLP: no

Exposure

Exposure Period : **24-96 h**

Test Results

Organ	*Effect*	*Rev.*	*OnSet*	*Sex*	*Affected in Exposed - Controls*
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LC0

LC0 for 24, 48 and 76 hours = 36 mg/L (w/v), for 96 hours = 20 mg/L. (All reported as ppm (w/v)).

LC50

LC50 for 24 hours = 158 mg/L, for 48 hours = 71 mg/L, for 72 hours = 69 mg/L, for 96 hours = 67 mg/L. (All reported as ppm (w/v)).

LC100

LC100 for 48, 72 and 96 hours = 117 mg/L. (All Reported as ppm (w/v)).

References

Primary Reference : **#UREAF***
Unpublished Report on Toxicity to Fish Test conducted by Environmental Agency, Japan

Secondary Reference : **!SIDSP***
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, (1994)

Study

End Point : **TERRESTRIAL ACUTE TOXICITY**

Chemical Name : **Benzenamine, 3-nitro-**
CAS Number : **99-09-2**

Species/strain/system : Bird, Quail
Dose / Concentration : **562 mg/kg**

Test Method and Conditions

Test method description : No information was provided.

Test Results

Organism	*Medium*	*Spec.*	*Route*	*Lifestage*	*Sex*	*Effect*	*Effect Comments*
BIRD			**ORL**	**ADULT**		**LD50**	Oral LD50 for birds was established as 562 mg/kg.

References

Primary Reference : **RTECS***
Registry of Toxic Effects of Chemical Substances

Secondary Reference : **!SIDSP***
OECD/SIDS. Screening Information Data Set (SIDS) of OECD High Production Volume Chemicals Programme, 14, (1994)

Substance

[redacted]

Chemical Name :
Reported Name : **m-Nitroaniline**
CAS Number : **99-09-2**

Area	*Type*	*Subject*	*Spec.*	*Description*	*Level / Summary Information :*
CAN	**REG**	**USE STORE LABEL**	**OCC**	**RQR**	INGREDIENT DISCLOSURE LIST CONCENTRATION 1% WEIGHT/WEIGHT. THE WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) IS A NATIONAL SYSTEM TO PROVIDE INFORMATION ON HAZARDOUS MATERIALS USED IN THE WORKPLACE. WHMIS IS IMPLEMENTED BY THE HAZARDOUS PRODUCTS ACT AND THE CONTROLLED PRODUCTS REGULATIONS (ADMINISTERED BY THE DEPARTMENT OF CONSUMER AND CORPORATE AFFAIRS). THE REGULATIONS IMPOSE STANDARDS ON EMPLOYERS FOR THE USE, STORAGE AND HANDLING OF CONTROLLED PRODUCTS AND ADDRESS LABELLING AND IDENTIFICATION, EMPLOYEE INSTRUCTION AND TRAINING, AS WELL AS THE UPKEEP OF A MATERIALS SAFETY DATA SHEET (MSDS). THE PRESENCE IN A CONTROLLED PRODUCT OF AN INGREDIENT IN A CONCENTRATION EQUAL TO OR GREATER THAN SPECIFIED IN THE INGREDIENT DISCLOSURE LIST MUST BE DISCLOSED IN THE SAFETY DATA SHEET. ***Title :***

Reference : ***Effective Date :*** 31DEC1987

Last Amendment : **CAGAAK, 122, 2, 551, 1988** ***Entry / Update :*** APR1991
CANADA GAZETTE PART II

Substance

[redacted]

Chemical Name :
Reported Name : **nitroaniline,m-**
CAS Number : **99-09-2**

Area	*Type*	*Subject*	*Spec.*	*Description*	*Level / Summary Information :*
CSK	**REG**	**CLASS**	**-**	**CLASS**	THIS SUBSTANCE IS CLASSIFIED AS POISON. ***Title :*** GOVERNMENT PROVISION NO. 192 ON POISONS AND A NOTHER SUBSTANCES HARMFUL TO HUMAN HEALTH

Reference : **SZCSR*, 42, 1217, 1988** ***Effective Date :*** MAY1990
SBIRKA ZAKONU CESKOSLOVENSKE SOCIALISTICKE REPUBLIKY (COLLECTION OF THE LAW OF CZECHOSLOVAK SOCIALIST REPUBLIC)

Last Amendment : **SZCSR*, 33, 762, 1990** ***Entry / Update :*** DEC1991
SBIRKA ZAKONU CESKOSLOVENSKE SOCIALISTICKE REPUBLIKY (COLLECTION OF THE LAW OF CZECHOSLOVAK SOCIALIST REPUBLIC)

Substance

[redacted]

Chemical Name :
Reported Name : **3-NITROANILINE**
CAS Number : **99-09-2**

Area	Type	Subject	Spec.	Description	Level / Summary Information :
DEU	REC	AQ USE	- INDST	CLASS RQR	THIS SUBSTANCE IS CLASSIFIED AS HAZARDOUS TO WATER (WATER-HAZARD CLASS: WGK 2). (THE DIFFE RENT CLASSES ARE: WGK 3 = VERY HAZARDOUS; WGK 2 = HAZARDOUS; WGK 1 = SLIGHTLY HAZARDOUS; W GK 0 = IN GENERAL NOT HAZARDOUS.) THE CLASSIF ICATION FORMS THE BASIS FOR WATER-PROTECTION REQUIREMENTS FOR INDUSTRIAL PLANTS IN WHICH W ATER-HAZARDOUS SUBSTANCES ARE HANDLED.

Title : ADMINISTRATIVE RULES CONCERNING WATER-HAZARDO US SUBSTANCES (VERWALTUNGSVORSCHRIFT WASSERGE FAEHRDENDE STOFFE)

Reference : **GMSMA6, 8, 114, 1990** ***Effective Date :***

Gemeinsames Ministerialblatt. Joint Ministerial Papers

Last Amendment : ***Entry / Update :*** DEC1991

Substance

Chemical Name :
Reported Name : **(m)-aniline**
CAS Number : **99-09-2**

Area	Type	Subject	Spec.	Description	Level / Summary Information :
DEU	REG	CLASS LABEL PACK	-	CLASS RQR RQR	CLASSIFICATION AND LABELLING IN GERMANY IS GE NERALLY THE SAME AS FOR THE EEC (SEE OJEC** L 180, 1991). HOWEVER, SLIGHT MODIFICATIONS MAY BE INTRODUCED FOR SOME SUBSTANCES IN THE GER MAN LEGISLATION.

Title : ORDINANCE ON HAZARDOUS SUBSTANCES. (GEFAHRSTO FFVERORDNUNG)

Reference : **BGZBAD, I, 1931, 1991** ***Effective Date :*** 15JUN1991

Bundesgesetzblatt. Federal Law Gazette

Last Amendment : ***Entry / Update :*** APR1992

Substance

Chemical Name :
Reported Name : **m-nitroaniline**
CAS Number : **99-09-2**

Area	Type	Subject	Spec.	Description	Level / Summary Information :
RUS	REG	AIR	AMBI	PSL	0.01MG/M3 1X/D

Title :

Reference : ***Effective Date :*** DEC1983

Last Amendment : **OBUAV*, 2947-83, 1983** ***Entry / Update :*** SEP1985

Orientivovochnye bezopasnye urovni vozdeystvya (OBUV) zagryaznyayushchikh veschchestv v atmosfernom vozdukhe naselennykh mest
(Tentative Safe Exposure Limits (TSEL) of contaminants in AmbientAir of Residential Areas)

Substance

Chemical Name :
Reported Name : **m-nitroaniline**
CAS Number : **99-09-2**

Area	Type	Subject	Spec.	Description	Level / Summary Information :
RUS	REG	AQ	SURF	MAC CLASS	0.15MG/L HAZARD CLASS: III

Title :

Reference : ***Effective Date :*** 1JAN1989

Last Amendment : **SPNPV*, 4630-88, 1988** ***Entry / Update :*** JUL1990

SANITARNYE PRAVILA I NORMY OKHRANY POVERKHNOSTNYKH VOD OT ZAGRIAZNENIA
(HEALTH REGULATION AND STANDARDS OF SURFACE WATER PROTECTION FROM CONTAMINATION)

Substance

Chemical Name :
Reported Name : **3-NITROANILINE**
CAS Number : **99-09-2**

Area	Type	Subject	Spec.	Description	Level / Summary Information :
USA	REG	MANUF	REQ	PRMT	; Summary - THE FOLLOWING CHEMICAL IS INCLUDE D ON A LIST OF CHEMICALS AND MIXTURES FOR WHI CH REPORTING IS CURRENTLY REQUIRED UNDER THE TOXIC SUBSTANCES CONTROL ACT SECTION 2607A. T HIS TOXIC SUBSTANCE IS SUBJECT TO PRELIMINARY ASSESSMENT INFORMATION RULES ON PRODUCT ION QUANTITIES, USES, EXPOSURES, AND ADVERSE EFFE CTS. MANUFACTURERS INCLUDING IMPORTERS MUST S UBMIT A REPORT FOR THIS LISTED CHEMICAL MANUF ACTURED AT EACH SITE.
		USE	OCC	PRMT	
		SAFTY	OCC	MXL	

Title : PRELIMINARY ASSESSMENT INFORMATION RULES

Reference : **FEREAC, 47, 26998, 1982** ***Effective Date :*** 1982

Federal Register

Last Amendment : **CFRUS*, 40, 712, 30, 1990** ***Entry / Update :*** OCT1991

Code of Federal Regulations

Substance

Chemical Name :
Reported Name : **m-nitroaniline**
CAS Number : **99-09-2**

Area	Type	Subject	Spec.	Description	Level / Summary Information :
USA	REG	AQ	GRND	MONIT	; Summary - THIS LIST IS REQUIRED ONLY FOR GR OUND-WATER MONITORING AT RCRA LAND BASED HAZA RDOUS WASTE DISPOSAL UNITS. THIS FINAL RULE W ILL REQUIRE THAT AN ANALYSIS OF ALL THE CONST ITUENTS OF THIS LIST BE PERFORMED ON THE GROU ND WATER TAKEN FROM WELLS SURROUNDING TH OSE UNITS. THIS ANALYSIS TAKES PLACE WHEN GROUND- WATER CONTAMINATION IS FIRST DETECTED, AND TH EN AGAIN ONCE PER YEAR 40 CFR 264. WHEN A LIS TED CONSTITUENT IS FOUND TO BE PRESENT A BACK GROUND VALUE MUST BE SET IN COMPLIANCE WITH 4 0 CFR 264.98(H)(2) UNLE SS OTHERWISE STATED.
		AQ	GRND	MXL	

Title : LIST (PHASE 1) OF HAZARDOUS CONSTITUENTS FOR GROUND-WATER MONITORING FINAL RULE: INCLUDING MAXIMUM CONCENTRATION OF CONSTITUENT: FOR GR OUNDWATER PROTECTION.

Reference : **FEREAC, 52, 25947, 1987** ***Effective Date :*** 1987

Federal Register

Last Amendment : **CFRUS*, 40, 264, 1990** ***Entry / Update :*** SEP1991

Code of Federal Regulations

Substance

Chemical Name :
Reported Name : **(m)-aniline**
CAS Number : **99-09-2**

Area	Type	Subject	Spec.	Description	Level / Summary Information :
EEC	**REG**	**CLASS LABEL PACK**	**-**	**CLASS RQR RQR**	CLASS: T - TOXIC; TOXIC BY INHALATION, IN CON TACT WITH SKIN AND IF SWALLOWED (R 23/24/25). DANGER OF CUMULATIVE EFFECTS (R 33). LABEL: T - TOXIC; TOXIC BY INHALATION, IN CONTACT WI TH SKIN AND IF SWALLOWED (R 23/24/25); DANGER OF CUMULATIVE EFFECTS (R 33); AFTER CONTACT WITH SKIN, WASH IMMEDIATELY WITH PLENTY OF... (TO BE SPECIFIED BY THE MANUFACTURER) (S 28); WEAR SUITABLE PROTECTIVE CLOTHING AND GLOVES (S 36/37); IF YOU FEEL UNWELL, SEEK MEDICAL A DVICE (SHOW THE LABEL WHERE POSSIBLE) (S 44). IT MUST BE STATED ON THE LABEL WHETHER IT IS A SPECIFIC ISOMER OR A MIXTURE OF ISOMERS. ***Title :*** COUNCIL DIRECTIVE 67/548/EEC OF 27 JUNE 1967 ON THE APROXIMATION OF THE LAWS, REGULATIONS AND ADMINISTRATIVE PROVISIONS RELATING TO THE CLASSIFICATION, PACKAGING AND LABELLING OF D ANGEROUS SUBSTANCES ***Reference :*** **OJEC**, 196, 1, 1967** ***Effective Date :*** 1JUL1992 **Official Journal of the European Communities** ***Last Amendment :*** **OJEC**, L 180, 79, 1991** ***Entry / Update :*** APR1992 **Official Journal of the European Communities**

Substance

Chemical Name :
Reported Name : **m-nitroaniline**
CAS Number : **99-09-2**

Area	Type	Subject	Spec.	Description	Level / Summary Information :
IMO	**REC**	**TRNSP LABEL PACK**	**MARIN**	**CLASS**	HAZARD CLASS: 6.1 = POISONOUS SUBSTANCE. PACK ING GROUP: II = MEDIUM DANGER (I=GREAT DANGER -III=MINOR DANGER). (APPLIES TO NITROANILINES (O-, M-, P-)). UN NO. 1661 ***Title :*** ***Reference :*** ***Effective Date :*** ***Last Amendment :*** **!, IMCOC*, 10004, 1990** ***Entry / Update :*** JAN1991 **INTERNATIONAL MARITIME DANGEROUS GOODS CODE**

Substance

Chemical Name :
Reported Name : **m-nitroaniline**
CAS Number : **99-09-2**

Area	*Type*	*Subject*	*Spec.*	*Description*	*Level / Summary Information :*
UN	**REC**	**TRNSP LABEL PACK**	**-**	**CLASS**	HAZARD CLASS: 6.1 = POISONOUS SUBSTANCE. PACK ING GROUP: II = MEDIUM DANGER (I=GREAT DANGER -III=MINOR DANGER). (APPLIES TO NITROANILINES (O-, M-, P-)). UN NO. 1661

Title :

Reference : ***Effective Date :***

Last Amendment : **!, UNTDG*, 15, 1989** ***Entry / Update :*** AUG1990

UN TRANSPORT OF DANGEROUS GOODS, RECOMMENDATION PREPARED BY THECOMMITTEE OF EXPERTS ON THE TRANSPORT OF DANGEROUS GOODS