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**MATERIAL SAFETY DATA SHEET**

**MSDS # PMC/RC/024/06**

Updated on 02 - Jan - 2006  
Product Name ACCINOX ZC  
Revision Number +REV 04  
UN Number 3077  
CAS No. 793-24-8

<b>Health Hazard :</b>	<b>1</b>
<b>Fire Hazard :</b>	<b>1</b>
<b>Reactivity :</b>	<b>0</b>
<b>Personal Protection :</b>	<b>X</b>

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING**

**PRODUCT NAME: ACCINOX ZC**

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Works & Registered Office:  
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**2. COMPOSITION/INFORMATION ON INGREDIENTS**

**PRODUCT DESCRIPTION** N-(1,3-dimethylbutyl)-N'-phenyl-p-phenylenediamine,

<b>HAZARDOUS INGREDIENT(S)</b>	<b>CAS No</b>	<b>%(W/W)</b>	<b>Symbol</b>	<b>R Phrases</b>
N-(1,3-Dimethylbutyl)-N'-phenyl-p-phenylenediamine (>95%)	793-24-8	>95	Xi,N	R43, R50/53

**3. HAZARDS IDENTIFICATION**

May cause skin irritation and sensitisation  
Inhalation of high concentrations may cause CNS depression and lung damage  
May cause eye irritation  
May be absorbed through skin  
See: **OTHER INFORMATION**

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

#### **4. FIRST-AID MEASURES**

- Inhalation Remove patient from exposure. Obtain medical attention if ill effects occur.
- Skin Contact Remove contaminated clothing. Wash immediately with soap and water. If symptoms (irritation or blistering) occur obtain medical attention. Contaminated clothing should be laundered before re-issue.
- Eye Contact Irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 10 minutes. Obtain medical attention.
- Ingestion Do not induce vomiting. Wash out mouth with water and give 200-300 ml (half a pint) of water to drink. Obtain medical attention.

#### **Further Medical Treatment**

Symptomatic treatment and supportive therapy as indicated.

See: **OTHER INFORMATION**

#### **5. FIRE-FIGHTING MEASURES**

Protect from sparks (dust explosion risk)

Mixing with high surface area adsorbents generates heat which can ignite the powder or surrounding materials.

If involved in a fire emits toxic fumes.

Thermal decomposition products: Toxic nitrogen oxides and carbon monoxide.

Extinguishing Media As appropriate for surrounding materials/equipment. Use water with care to avoid possible violent production of steam.

Fire Fighting & Protective Equipment : A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions.

#### **6. ACCIDENTAL RELEASE MEASURES**

Do not allow to enter drains, sewers or watercourses. Use appropriate containment to avoid environmental contamination. Clear up spillages. Transfer to a container for disposal or recovery. Ensure suitable personal protection during removal of spillages. Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

## 7. HANDLING AND STORAGE

### 7.1 HANDLING

Avoid contact with skin and eyes.

Avoid contact with hot liquid.

Avoid breathing vapours.

Wash thoroughly with soap and water after handling the product.

Do not reuse the container for other materials, observe all label precautions till the container is destroyed as per local/govt rules.

### 7.2 STORAGE

Store in a cool, dry, well-ventilated place away from direct sunlight.

Keep away from oxidising agents, acids, alkalis.

Incompatible with strong oxidising agents

Suitable containers : Corrugated paper box with polythene liner inside.

Storage Temperature : Ambient.

Storage Life :1 year(s)

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Wear suitable gloves and eye/face protection.

Avoid breathing mist or dust.

Provide necessary ventilation to minimise exposure.

### Occupational Exposure Limits

No occupational exposure limit listed but 2.5 mg/m<sup>3</sup> is recommended.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Form	Granules / pastilles
Colour	Dark brown, severely staining
Odour	Aromatic
Odour Threshold (ppm)	No data.
pH (Value)	No data.
Boiling Point (Deg C)	230
Melting Point (Deg C)	45 (approx)
Flash Point (Deg C)	155 to 200 (closed cup) 204 (open cup)
Flammable Limits	No data.

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Auto Ignition Temp (°C)	227
Explosive Properties	NA
Oxidising Properties	No data.
Vapour Pressure (Pascals)	870 (200 Deg C) 9300 (300 Deg C)
Density (g/ml)	1.02 at 25 Deg C
Solubility (Water)	Insoluble
Solubility (Other)	Soluble in acetone
Partition Coefficient	log P n-octanol/water >4
Specific Gravity	1.02 @ 25° C
Molecular Weight	268.4
Molecular Formula	C18-H24-N2

## 10. STABILITY AND REACTIVITY

Incompatible materials oxidising agents, acids and alkalis.

Stability Stable at NTP

Materials to avoid Strong oxidising materials. Do not store near Insoluble Sulphur as traces of amine vapours may cause reversion to soluble sulphur

Hazardous Reactions None known.

Hazardous Polymerisation Will not occur.

Hazardous Decomposition Product(s) : Toxic nitrogen oxides and carbon monoxide.

## 11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity : LD50 (Rat) 4400 mg/kg (male); 5600 mg/kg (female)

Acute Dermal Toxicity : LD50 (Rabbit) >7900 mg/kg

Combustion will evolve very toxic and irritant vapours.

Skin Contact May cause sensitisation by skin contact.  
Unlikely to be hazardous by skin absorption.

Eye Contact May cause mild eye irritation.  
Slight/mild irritant to rabbit eyes.

Ingestion Low oral toxicity.

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Long Term Exposure      A study in animals has shown that repeated doses produce slight foetotoxic effects but no teratogenic effects.

A lifetime ingestion study in animals has shown that repeated doses produce no significant effects. The no effect level was 23mg/kg. There is no evidence of mutagenic or clastogenic (chromosome effects) potential.  
It is unlikely to present a carcinogenic hazard to man.

## 12. ECOLOGICAL INFORMATION

### Environmental Fate and Distribution

Solid with low volatility. The substance is sparingly soluble in water. The substance has potential for bioaccumulation.

### Persistence and Degradation

Not readily biodegradable.

### Toxicity

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

LC50 (Rainbow Trout) (96 hours) : 0.15 mg/l

LC50 (Fathead Minnow) (96 hour): 0.45 mg/l

EC50 (Daphnia Magna) (48 hour) : 0.80 mg/l

EC50 (algae) (96 hours) : 0.60 mg/l

WGK 2 (self classification)

### Effect on Effluent Treatment

IC50 (Sewage sludge organisms) (3hr) >100mg/l

## 13. DISPOSAL CONSIDERATIONS

This material and/or its container must be disposed of as hazardous waste. Disposal should be in accordance with local, state or national legislation. Empty containers may retain product residue, should also be treated as hazardous waste.

## 14. TRANSPORT INFORMATION

Not Classified as Dangerous for Transport.

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UN No. : 3077  
UN Pack. Group : III

**SEA**

IMDG Class

-primary 9

Marine Pollutant Classified as a Marine Pollutant

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,  
N.O.S. (N-(1,3-Dimethylbutyl)-N'-phenyl- p-phenylenediamine)

**ROAD/RAIL**

ADR/RID Class 9

ADR/RID Item No 12(c)

**15. REGULATORY INFORMATION**

EC Classification Irritant, Hazard Symbol Xi



Dangerous for the environment, N



Risk Phrases: R43 May cause sensitisation by skin contact.  
R50 Very toxic to aquatic organisms.  
R53 May cause long-term adverse effects in the aquatic environment.

Safety Phrases: S24 Avoid contact with skin.  
S36 Wear suitable protective clothing.  
S60 This material and/its container must be disposed of as hazardous waste.  
S61 Avoid release to the environment. Refer to special instructions/safety data sheets.

**16. OTHER INFORMATION**

Use : Antidegradant/antiozonant

**Special notes:** Tests by Hen/e-Bazin et al demonstrate that 6PPD is comparable with IPPD in its skin sensitisation potential. Cross-sensitisation between 6PPD and other p-phenylene diamine antidegradants has also been observed and reported.

**Reference:**

Herve-Bazin, B. et al, Occupational eczema from N-isopropyl-N'-phenyl-p-phenylenediamine (IPPD) and N-(-1,3-dimethyl butyl)-N'-phenyl-p-phenylene diamine (DMPPD) in tyres. Contact Dermatitis, 1977; 3: 1-15.

HMIS rating: Health: 1  
Flammability: 1  
Reactivity: 0  
PPI: X

Legend : 0(HMIS) Minimal hazard  
1(HMIS) Slight hazard  
2(HMIS) Moderate hazard  
3(HMIS) Serious hazard  
4(HMIS) Severe hazard  
X(HMIS) Personal protective rating to be supplied by user depending on the use conditions

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