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**MATERIAL SAFETY DATA SHEET**

**MSDS # PMC/RC/023/06**

Updated on 02 - Jan - 2006  
Product Name ACCINOX ZA  
Revision Number +REV 04  
UN Number 3077  
CAS No. 101-72-4

<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 ZA**

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**2. COMPOSITION/INFORMATION ON INGREDIENTS**

**PRODUCT DESCRIPTION** N-isopropyl-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-isopropyl-N'- phenyl- p-phenylenediamine (Impurities may contain a second isopropyl group (on Nitrogen) or do not contain the isopropyl group)	101-72-4	>97	Xn,N	R22/43, R50/53

**3. HAZARDS IDENTIFICATION**

May cause skin 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**

Flash Point: >200°C

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: Oxides of Carbon and Nitrogen

Extinguishing Media As appropriate for surrounding materials/equipment. Use water spray (with care to avoid possible violent production of steam) to keep the container cool, foam and dry chemical.

Fire Fighting A self contained breathing apparatus and suitable  
Protective Equipment : 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 breathing vapours/contact with hot liquid.

### 7.2 STORAGE

Keep away from oxidising agents, acids, alkalis, moisture, heat and direct sunlight.

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.

Provide natural or mechanical 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	Beads
Colour	Dark brown, severely staining
Odour	Aromatic
Odour Threshold (ppm)	No data.
pH (Value)	No data.
Boiling Point (Deg C)	220 °C @ 1.33 kPa
Melting Point (Deg C)	70 (min)
Flash Point (Deg C)	>200
Flammable Limits	No data.
Auto Ignition Temp (°C)	>500
Explosive Properties	Not applicable.
Oxidising Properties	No data.
Solubility (Water)	(15 mg/l), Practically insoluble
Solubility (Other)	Soluble in acetone
Specific Gravity @ 25 °C	1.1 (typical)
Molecular Weight	226.32
Molecular Formula	C15H18N2

## 10. STABILITY AND REACTIVITY

Chemical Stability	Stable under NTP
Incompatible materials	Oxidising agents (H <sub>2</sub> O <sub>2</sub> , Cl <sub>2</sub> ), acids and alkalis.
Hazardous Reactions	None known.
Conditions to avoid	Heat , flame & sparks. Do not store near insoluble sulphur
Hazardous Polymerisation	Will not occur
Hazardous Decomposition: Product(s)	Nitrogen oxides, carbon monoxide, carbon dioxide. (See Section 5).

## 11. TOXICOLOGICAL INFORMATION

Oral	Acute oral LD50 (Rat) : 900 mg/kg
Inhalation	Combustion will evolve very toxic and irritant vapours.
Skin Contact	May cause sensitisation by skin contact. Acute Dermal LD50 (Rabbit) : >7500 mg/kg
Eye Contact	May cause mild eye irritation. Slight/mild irritant to rabbit eyes.
Ingestion	Low oral toxicity.
Long Term Exposure	A study in animals has shown that repeated doses produce slight foetotoxic effects but no teratogenic effects.

## 12. ECOLOGICAL INFORMATION

### Environmental Fate and Distribution

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

Acute Fish Toxicity :	96 hrs LC50 (Bluegill Sunfish):	0.43 mg/l
	96 hrs LC50 (Rainbow Trout):	0.34 mg/l
	96 hrs LC50 (Flathead Minnows):	0.41 mg/l
Acute Crustaceans	48 hrs LC50 (Daphnia Magna):	1.10 mg/l
Acute Algae Toxicity	96 hrs EC50 (Green Algae):	0.40 mg/l
Octanol/Water Partition Coefficient:	LogP=3.88	
Bioconcentration Factor:	170 (Calculated)	

### 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.

### 14. TRANSPORT INFORMATION

UN No. : 3077  
UN Pack. Group : III

#### SEA

IMDG Class  
-primary 9

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

#### ROAD/RAIL

ADR/RID Class 9

### 15. REGULATORY INFORMATION

EC Classification Harmful, Xn



Dangerous for the environment, N



Risk Phrases R22 Harmful if swallowed.  
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.  
S25 Avoid contact with the eyes.  
S36 Wear suitable protective clothing.  
S57 Use appropriate containment to avoid environmental contamination.  
S60 This material and/or its container must be disposed of as hazardous waste.  
S61 Avoid release to the environment. Refer to special instructions/Safety data sheet.

## 16. OTHER INFORMATION

Use : Antioxidant/antiozonant for the rubber industry

**Special notes:** Tests by Hen/e-Bazin et al demonstrate that IPPD is comparable with 6PPD in its skin sensitisation potential. Cross-sensitisation between IPPD 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-dimethyl-1,3-butyl-N'-phenyl-p-phenylene diamine (DMPPD) in tyres. Contact Dermatitis, 1977; 3: 1-15.

OECS SIDS on N-isopropyl-N'-phenyl-p-phenylenediamine,  
(Reference: SIDS Initial Assessment Report for SIAM 10, Tokyo 15-17, March 2000)

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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